

BANK OF AMERICA CORP /DE/  
Form 10-Q  
July 31, 2017

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

FORM 10-Q  
(Mark One)

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES  
EXCHANGE ACT OF 1934

For the Quarterly Period Ended June 30, 2017

or

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES  
EXCHANGE ACT OF 1934

For the transition period from \_\_\_\_\_ to \_\_\_\_\_

Commission file number:

1-6523

Exact name of registrant as specified in its charter:

Bank of America Corporation

State or other jurisdiction of incorporation or organization:

Delaware

IRS Employer Identification No.:

56-0906609

Address of principal executive offices:

Bank of America Corporate Center

100 N. Tryon Street

Charlotte, North Carolina 28255

Registrant's telephone number, including area code:

(704) 386-5681

Former name, former address and former fiscal year, if changed since last report:

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes  No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

Yes  No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act (check one).

Non-accelerated filer

Large accelerated filer  Accelerated filer  (do not check if a smaller reporting company)  Smaller reporting company

Emerging growth company

Yes  No

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the

Exchange Act.

Yes No

Indicate by check mark whether the registrant is a shell company (as defined in Exchange Act Rule 12b-2).

Yes No

On July 28, 2017, there were 9,850,580,344 shares of Bank of America Corporation Common Stock outstanding.

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Bank of America Corporation and Subsidiaries

June 30, 2017

Form 10-Q

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## Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

Bank of America Corporation (the "Corporation") and its management may make certain statements that constitute "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. These statements can be identified by the fact that they do not relate strictly to historical or current facts. Forward-looking statements often use words such as "anticipates," "targets," "expects," "hopes," "estimates," "intends," "plans," "goals," "believes," "continue" and other similar expressions or future or conditional verbs such as "will," "may," "might," "should," "would" and "could." Forward-looking statements represent the Corporation's current expectations, plans or forecasts of its future results, revenues, expenses, efficiency ratio, capital measures, and future business and economic conditions more generally, and other future matters. These statements are not guarantees of future results or performance and involve certain known and unknown risks, uncertainties and assumptions that are difficult to predict and are often beyond the Corporation's control. Actual outcomes and results may differ materially from those expressed in, or implied by, any of these forward-looking statements.

You should not place undue reliance on any forward-looking statement and should consider the following uncertainties and risks, as well as the risks and uncertainties more fully discussed under Item 1A. Risk Factors of our 2016 Annual Report on Form 10-K and in any of the Corporation's subsequent Securities and Exchange Commission filings: potential claims, damages, penalties, fines and reputational damage resulting from pending or future litigation, regulatory proceedings, or enforcement actions, including inquiries into our retail sales practices, and the possibility that amounts may be in excess of the Corporation's recorded liability and estimated range of possible loss for litigation exposures; the possibility that the Corporation could face increased servicing, securities, fraud, indemnity, contribution or other claims from one or more counterparties, including trustees, purchasers of loans, underwriters, issuers, other parties involved in securitizations, monolines or private-label and other investors; the possibility that future representations and warranties losses may occur in excess of the Corporation's recorded liability and estimated range of possible loss for its representations and warranties exposures; the Corporation's ability to resolve representations and warranties repurchase and related claims, including claims brought by investors or trustees seeking to avoid the statute of limitations for repurchase claims; uncertainties about the financial stability and growth rates of non-U.S. jurisdictions, the risk that those jurisdictions may face difficulties servicing their sovereign debt, and related stresses on financial markets, currencies and trade, and the Corporation's exposures to such risks, including direct, indirect and operational; the impact of U.S. and global interest rates, currency exchange rates

and economic conditions; the impact on the Corporation's business, financial condition and results of operations of a potential higher interest rate environment; the possibility that future credit losses may be higher than currently expected due to changes in economic assumptions, customer behavior, adverse developments with respect to U.S. or global economic conditions, and other uncertainties; the impact on the Corporation's business, financial condition and results of operations from a protracted period of lower oil prices or ongoing volatility with respect to oil prices; the Corporation's ability to achieve its expense targets or net interest income expectations or other projections or expectations; adverse changes to the Corporation's credit ratings from the major credit rating agencies; estimates of the fair value of certain of the Corporation's assets and liabilities; uncertainty regarding the content, timing and impact of regulatory capital and liquidity requirements, including the approval of our internal models methodology for calculating counterparty credit risk for derivatives; the potential impact of total loss-absorbing capacity requirements; potential adverse changes to our global systemically important bank (G-SIB) surcharge; the potential impact of Federal Reserve actions on the Corporation's capital plans; the possible impact of the Corporation's failure to remediate shortcomings identified by banking regulators in the Corporation's Resolution Plan; the impact of implementation and compliance with U.S. and international laws, regulations and regulatory interpretations, including,

but not limited to, recovery and resolution planning requirements, Federal Deposit Insurance Corporation (FDIC) assessments, the Volcker Rule, fiduciary standards and derivatives regulations; a failure in or breach of the Corporation's operational or security systems or infrastructure, or those of third parties, including as a result of cyberattacks; the impact on the Corporation's business, financial condition and results of operations from the planned exit of the United Kingdom (U.K.) from the European Union (EU); and other similar matters.

Forward-looking statements speak only as of the date they are made, and the Corporation undertakes no obligation to update any forward-looking statement to reflect the impact of circumstances or events that arise after the date the forward-looking statement was made.

Notes to the Consolidated Financial Statements referred to in the Management's Discussion and Analysis of Financial Condition and Results of Operations (MD&A) are incorporated by reference into the MD&A. Certain prior-period amounts have been reclassified to conform to current-period presentation. Throughout the MD&A, the Corporation uses certain acronyms and abbreviations which are defined in the Glossary.

## Executive Summary

### Business Overview

The Corporation is a Delaware corporation, a bank holding company (BHC) and a financial holding company. When used in this report, “the Corporation” may refer to Bank of America Corporation individually, Bank of America Corporation and its subsidiaries, or certain of Bank of America Corporation’s subsidiaries or affiliates. Our principal executive offices are located in Charlotte, North Carolina. Through our banking and various nonbank subsidiaries throughout the U.S. and in international markets, we provide a diversified range of banking and nonbank financial services and products through four business segments: Consumer Banking, Global Wealth & Investment Management (GWIM), Global Banking and Global Markets, with the remaining operations recorded in All Other. We operate our banking activities primarily under the Bank of America, National Association (Bank of America, N.A. or BANA) charter. At June 30, 2017, the Corporation had approximately \$2.3 trillion in assets and a headcount of approximately 211,000 employees. Headcount remained relatively unchanged since December 31, 2016. Beginning in the second quarter of 2017, we changed from reporting full-time equivalent employees to reporting headcount. Prior-period amounts have been reclassified.

As of June 30, 2017, we operated in all 50 states, the District of Columbia, the U.S. Virgin Islands, Puerto Rico and more than 35 countries. Our retail banking footprint covers approximately 83 percent of the U.S. population, and we serve approximately 47 million consumer and small business relationships with approximately 4,500 retail financial centers, approximately 16,000 ATMs, and leading digital banking platforms ([www.bankofamerica.com](http://www.bankofamerica.com)) with approximately 34 million active users, including 23 million mobile active users. We offer industry-leading support to approximately three million small business owners. Our wealth management businesses, with client balances of approximately \$2.6 trillion, provide tailored solutions to meet client needs through a full set of investment management, brokerage, banking, trust and retirement products. We are a global leader in corporate and investment banking and trading across a broad range of asset classes serving corporations, governments, institutions and individuals around the world.

### Second Quarter 2017 Economic and Business Environment

Macroeconomic trends in the U.S. in the second quarter were characterized by continued economic growth and low inflation, after GDP growth decelerated in the first quarter. Consumer and business attitudes on the economy have remained broadly unchanged from the high historical levels reached in the first quarter. The labor market remained healthy, with sustained strong non-farm payroll gains in the second quarter. Contrary to the Federal Open Market Committee projections, inflation fell during the quarter as year-over-year growth in headline CPI decreased by approximately half a percentage point. In June, the Federal Reserve raised its target federal funds rate corridor, in line with market

expectations. Financial markets also responded to several ongoing developments: first, in response to the June rate hike and the potential for additional hikes over 2017, the Treasury yield curve continued to flatten. Second, the equity markets continued to rally, albeit with weaker momentum, with the S&P 500 index gaining over 2.5 percent. The U.S. Dollar weakened, erasing all the gains that followed the November presidential election.

Abroad, after eurozone GDP grew in the first quarter at the fastest pace in two years, the recovery continued to gain momentum; although, political uncertainty remained elevated ahead of the French elections. The more robust economic momentum has failed to translate into stronger inflationary pressures, which remained depressed over the quarter. As a result, the European Central Bank remained cautious about the outlook for monetary policy and its quantitative easing program despite the improved growth outlook.

The U.K. gained center-stage on both the economic and political front. The impact of Brexit has started to materialize in the economy with the first quarter GDP growth coming close to stagnation and many indicators weakening further over the second quarter, albeit still pointing to positive growth. At the same time, inflation continued in an upward trend and reached the highest level since 2012, well above the Bank of England target, driven by the pass-through from the Sterling depreciation that followed the Brexit referendum.

In Japan, economic momentum remained intact in the second quarter, though business investment had slowed early in the year. The monetary policy stance remained unchanged while underlying inflation strengthened slightly over the quarter. In China, the service sector remained a key driver of economic growth. The Yuan had a volatile quarter

reaching a seven-month high in June which contributed to a softening of supply chain inflationary pressures over the quarter.

#### Recent Events

##### Capital Management

On June 28, 2017, following the Federal Reserve's non-objection to our 2017 Comprehensive Capital Analysis and Review (CCAR) capital plan, the Board of Directors (the Board) authorized the repurchase of \$12.9 billion in common stock from July 1, 2017 through June 30, 2018, including approximately \$900 million to offset the effect of equity-based compensation plans during the same period. The common stock repurchase authorization includes both common stock and warrants. Also in connection with the non-objection to our CCAR plan, on July 26, 2017, the Board declared a quarterly common stock dividend of \$0.12 per share, payable on September 29, 2017 to shareholders of record as of September 1, 2017. For additional information, see the Corporation's Current Report on Form 8-K filed on June 28, 2017.

During the second quarter of 2017, we repurchased approximately \$2.2 billion of common stock pursuant to the Board's repurchase authorizations announced on June 29, 2016 and January 13, 2017. These repurchase authorizations expired on June 30, 2017. For additional information, see Capital Management on page 28.

##### Sale of Non-U.S. Consumer Credit Card Business

On June 1, 2017, the Corporation completed the previously-announced sale of its non-U.S. consumer credit card business to a third party and recorded an after-tax gain of \$103 million. As previously disclosed, the sale improved our transitional Basel 3 Common equity tier 1 capital ratio by 11 basis points (bps) under the Advanced approaches and 15 bps under the Standardized approach. This sale completes the transformation of our consumer credit card business from a multi-country, multi-brand business to a single-brand business serving core retail customers in the United States. For more information, see Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements.

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## Series T Preferred Stock

In connection with an investment in the Corporation's Series T preferred stock in 2011, the holder of the Series T 6% Non-cumulative Preferred Stock (Series T preferred stock) received warrants to purchase up to 700 million shares of the Corporation's common stock at an exercise price of \$7.142857 per share. The holder of the Series T preferred stock publicly announced on June 30, 2017, consistent with similar statements made in its 2016 Annual Report to Shareholders, that it intends to exercise the warrants and acquire all 700 million shares of our common stock using the Series T preferred stock to satisfy the exercise price

given its expectation of an increase in our common stock dividend. Upon exercise of the warrants, common shares outstanding will increase; however, there will be no effect on diluted earnings per share as this conversion has been previously included in the Corporation's diluted earnings per share calculation.

## Selected Financial Data

Table 1 provides selected consolidated financial data for the three and six months ended June 30, 2017 and 2016, and at June 30, 2017 and December 31, 2016.

Table 1 Selected Financial Data

	Three Months Ended		Six Months Ended June		
	June 30		30		
(Dollars in millions, except per share information)	2017	2016	2017	2016	
<b>Income statement</b>					
Revenue, net of interest expense	\$22,829	\$21,286	\$45,077	\$42,076	
Net income	5,269	4,783	10,125	8,255	
Diluted earnings per common share	0.46	0.41	0.87	0.68	
Dividends paid per common share	0.075	0.05	0.15	0.10	
<b>Performance ratios</b>					
Return on average assets	0.93	% 0.88	% 0.91	% 0.76	%
Return on average common shareholders' equity	8.00	7.40	7.64	6.26	
Return on average tangible common shareholders' equity <sup>(1)</sup>	11.23	10.54	10.76	8.95	
Efficiency ratio	60.13	63.38	63.39	67.28	
<b>Balance sheet</b>					
Total loans and leases			\$916,666	\$906,683	
Total assets			2,254,529	2,187,702	
Total deposits			1,262,980	1,260,934	
Total common shareholders' equity			245,767	241,620	
Total shareholders' equity			270,987	266,840	

Return on average tangible common shareholders' equity is a non-GAAP financial measure. For additional information and a corresponding reconciliation to accounting principles generally accepted in the United States of America (GAAP) financial measures, see Non-GAAP Reconciliations on page 67.

## Financial Highlights

Net income was \$5.3 billion and \$10.1 billion, or \$0.46 and \$0.87 per diluted share for the three and six months ended June 30, 2017 compared to \$4.8 billion and \$8.3 billion, or \$0.41 and \$0.68 per diluted share for the same periods in

2016. The results for the three and six months ended June 30, 2017 compared to the same periods in 2016 were driven by higher revenue and lower provision for credit losses and an increase in noninterest expense.

Total assets increased \$66.8 billion from December 31, 2016 to \$2.3 trillion at June 30, 2017 due to higher trading account assets primarily driven by increased client financing activities in equities, growth in securities borrowed or purchased under agreements to resell primarily due to increased matched-book

activity, as well as higher cash and cash equivalents and loans and leases. These increases were partially offset by the impact of the sale of the non-U.S. consumer credit card business. Total liabilities increased \$62.7 billion from December 31, 2016 to \$2.0 trillion at June 30, 2017 primarily driven by higher securities loaned or sold under agreements to repurchase due to increased matched-book activity, an increase in trading account liabilities as well as an increase in short-term borrowings. Shareholders' equity increased \$4.1 billion from December 31, 2016 primarily due to net income, partially offset by returns of capital to shareholders of \$7.3 billion through common stock repurchases and common and preferred stock dividends.

Table 2 Summary Income Statement

(Dollars in millions)	Three Months		Six Months	
	Ended June 30		Ended June 30	
	2017	2016	2017	2016
Net interest income	\$10,986	\$10,118	\$22,044	\$20,603
Noninterest income	11,843	11,168	23,033	21,473
Total revenue, net of interest expense	22,829	21,286	45,077	42,076
Provision for credit losses	726	976	1,561	1,973
Noninterest expense	13,726	13,493	28,574	28,309
Income before income taxes	8,377	6,817	14,942	11,794
Income tax expense	3,108	2,034	4,817	3,539
Net income	5,269	4,783	10,125	8,255
Preferred stock dividends	361	361	863	818
Net income applicable to common shareholders	\$4,908	\$4,422	\$9,262	\$7,437
Per common share information				
Earnings	\$0.49	\$0.43	\$0.92	\$0.72
Diluted earnings	0.46	0.41	0.87	0.68

## Net Interest Income

Net interest income increased \$868 million to \$11.0 billion, and \$1.4 billion to \$22.0 billion for the three and six months ended June 30, 2017 compared to the same periods in 2016. The net interest yield increased 11 bps to 2.29 percent, and nine bps to 2.32 percent. These increases were primarily driven by a higher interest rate environment and loan growth. For more information regarding interest rate risk management, see Interest Rate Risk Management for the Banking Book on page 63.

## Noninterest Income

Table 3 Noninterest Income

(Dollars in millions)	Three Months		Six Months	
	Ended June 30		Ended June 30	
	2017	2016	2017	2016
Card income	\$1,469	\$1,464	\$2,918	\$2,894
Service charges	1,977	1,871	3,895	3,708
Investment and brokerage services	3,317	3,201	6,579	6,383
Investment banking income	1,532	1,408	3,116	2,561
Trading account profits	1,956	2,018	4,287	3,680
Mortgage banking income	230	312	352	745
Gains on sales of debt securities	101	249	153	439
Other income	1,261	645	1,733	1,063
Total noninterest income	\$11,843	\$11,168	\$23,033	\$21,473

Noninterest income increased \$675 million to \$11.8 billion, and \$1.6 billion to \$23.0 billion for the three and six months ended June 30, 2017 compared to the same periods in 2016. The following highlights the more significant changes.

Service charges increased \$106 million and \$187 million primarily driven by the impact of pricing strategies and higher treasury services-related revenue.

Investment and brokerage services income increased \$116 million and \$196 million primarily driven by higher assets under management (AUM) flows and market valuations, partially offset by lower transactional revenue.

Investment banking income increased \$124 million and \$555 million primarily due to higher advisory fees, and for the six month period, higher debt and equity issuance fees.

Trading account profits decreased \$62 million for the three-month period primarily due to weaker performance across fixed-income products, and increased \$607 million for the six-month period primarily due to stronger performance across credit products led by mortgages, and increased client financing activity in equities.

Mortgage banking income decreased \$82 million and \$393 million primarily due to lower production income driven by lower volumes and net servicing income due to a smaller servicing portfolio.

Gains on sales of debt securities decreased \$148 million and \$286 million primarily driven by lower sales volume.

Other income increased \$616 million and \$670 million primarily due to the \$793 million pre-tax gain recognized in connection with the sale of the non-U.S. consumer credit card business.

#### Provision for Credit Losses

The provision for credit losses decreased \$250 million to \$726 million, and \$412 million to \$1.6 billion for the three and six months ended June 30, 2017 compared to the same periods in 2016 primarily due to credit quality improvements in the consumer real estate portfolio and reductions in energy exposures in the commercial portfolio, partially offset by portfolio seasoning and loan growth in the U.S. credit card portfolio. For more information on the provision for credit losses, see Provision for Credit Losses on page 57.

## Noninterest Expense

Table 4 Noninterest Expense

(Dollars in millions)	Three Months		Six Months	
	Ended June 30		Ended June 30	
	2017	2016	2017	2016
Personnel	\$7,712	\$7,722	\$16,870	\$16,574
Occupancy	1,001	1,036	2,001	2,064
Equipment	427	451	865	914
Marketing	442	414	774	833
Professional fees	485	472	941	897
Amortization of intangibles	160	186	322	373
Data processing	773	717	1,567	1,555
Telecommunications	177	189	368	362
Other general operating	2,549	2,306	4,866	4,737
Total noninterest expense	\$13,726	\$13,493	\$28,574	\$28,309

Noninterest expense increased \$233 million to \$13.7 billion, and \$265 million to \$28.6 billion for the three and six months ended June 30, 2017 compared to the same periods in 2016. The increases were primarily due to higher other general operating expense which included a \$295 million impairment charge related

to certain data centers in the process of being sold and higher FDIC expense, partially offset by lower litigation expense. The increase in the six-months period was also driven by an increase in personnel expense due in part to higher revenue-related incentive costs.

## Income Tax Expense

Table 5 Income Tax Expense

(Dollars in millions)	Three Months		Six Months Ended		
	Ended June 30		June 30		
	2017	2016	2017	2016	
Income before income taxes	\$8,377	\$6,817	\$14,942	\$11,794	
Income tax expense	3,108	2,034	4,817	3,539	
Effective tax rate	37.1	% 29.8	% 32.2	% 30.0	%

The effective tax rates for both the three and six months ended June 30, 2017 were driven by the impact of our recurring tax preference benefits, offset by \$690 million of tax expense recognized in connection with the sale of the non-U.S. consumer credit card business, which related to gains on derivatives used

to hedge the currency risk of the net investment. The six-month effective tax rate also included a tax benefit related to a new accounting standard on share-based compensation. The effective tax rates for the three and six months ended June 30, 2016 were driven by our recurring tax preference items.

Table 6 Selected Quarterly Financial Data

(Dollars in millions, except per share information)	2017 Quarters		2016 Quarters			
	Second	First	Fourth	Third	Second	
<b>Income statement</b>						
Net interest income	\$10,986	\$11,058	\$10,292	\$10,201	\$10,118	
Noninterest income	11,843	11,190	9,698	11,434	11,168	
Total revenue, net of interest expense	22,829	22,248	19,990	21,635	21,286	
Provision for credit losses	726	835	774	850	976	
Noninterest expense	13,726	14,848	13,161	13,481	13,493	
Income before income taxes	8,377	6,565	6,055	7,304	6,817	
Income tax expense	3,108	1,709	1,359	2,349	2,034	
Net income	5,269	4,856	4,696	4,955	4,783	
Net income applicable to common shareholders	4,908	4,354	4,335	4,452	4,422	
Average common shares issued and outstanding	10,014	10,100	10,170	10,250	10,328	
Average diluted common shares issued and outstanding	10,822	10,915	10,959	11,000	11,059	
<b>Performance ratios</b>						
Return on average assets	0.93	% 0.88	% 0.85	% 0.90	% 0.88	%
Four quarter trailing return on average assets <sup>(1)</sup>	0.89	0.88	0.82	0.76	0.74	
Return on average common shareholders' equity	8.00	7.27	7.04	7.27	7.40	
Return on average tangible common shareholders' equity <sup>(2)</sup>	11.23	10.28	9.92	10.28	10.54	
Return on average shareholders' equity	7.79	7.35	6.91	7.33	7.25	
Return on average tangible shareholders' equity <sup>(2)</sup>	10.54	10.00	9.38	9.98	9.93	
Total ending equity to total ending assets	12.02	11.93	12.20	12.30	12.23	
Total average equity to total average assets	11.95	12.01	12.24	12.28	12.13	
Dividend payout	15.25	17.37	17.68	17.32	11.73	
<b>Per common share data</b>						
Earnings	\$0.49	\$0.43	\$0.43	\$0.43	\$0.43	
Diluted earnings	0.46	0.41	0.40	0.41	0.41	
Dividends paid	0.075	0.075	0.075	0.075	0.05	
Book value	24.88	24.36	24.04	24.19	23.71	
Tangible book value <sup>(2)</sup>	17.78	17.23	16.95	17.14	16.71	
<b>Market price per share of common stock</b>						
Closing	\$24.26	\$23.59	\$22.10	\$15.65	\$13.27	
High closing	24.32	25.50	23.16	16.19	15.11	
Low closing	22.23	22.05	15.63	12.74	12.18	
Market capitalization	\$239,643	\$235,291	\$222,163	\$158,438	\$135,577	

(1) Calculated as total net income for four consecutive quarters divided by annualized average assets for four consecutive quarters.

(2)

Tangible equity ratios and tangible book value per share of common stock are non-GAAP financial measures. For more information on these ratios and for corresponding reconciliations to GAAP financial measures, see Non-GAAP Reconciliations on page 67.

- (3) For more information on the impact of the purchased credit-impaired (PCI) loan portfolio on asset quality, see Consumer Portfolio Credit Risk Management on page 39.
- (4) Includes the allowance for loan and lease losses and the reserve for unfunded lending commitments. Balances and ratios do not include loans accounted for under the fair value option. For additional exclusions from nonperforming loans, leases and foreclosed properties, see Consumer Portfolio Credit Risk Management – Nonperforming Consumer Loans, Leases and Foreclosed Properties Activity on page 47 and corresponding Table 33, and Commercial Portfolio Credit Risk Management – Nonperforming Commercial Loans, Leases and Foreclosed Properties Activity on page 52 and corresponding Table 40. Asset quality metrics include \$242 million and \$243 million of non-U.S. credit card allowance for loan and lease losses and \$9.5 billion and \$9.2 billion of non-U.S. credit card loans in the first quarter of 2017 and in the fourth quarter of 2016, which were included in assets of business held for sale on the Consolidated Balance Sheet at December 31, 2016. On June 1, 2017, the Corporation completed the sale of its non-U.S. consumer credit card business.
- (7) Primarily includes amounts allocated to the U.S. credit card and unsecured consumer lending portfolios in Consumer Banking, PCI loans and the non-U.S. credit card portfolio in All Other. Net charge-offs exclude \$55 million, \$33 million, \$70 million, \$83 million, and \$82 million of write-offs in the PCI loan portfolio in the second and first quarters of 2017, and in the fourth, third and second quarters of 2016, respectively. For more information on PCI write-offs, see Consumer Portfolio Credit Risk Management – Purchased Credit-impaired Loan Portfolio on page 45. Includes net charge-offs of \$44 million and \$41 million on non-U.S. credit card loans in the first quarter of 2017 and in the fourth quarter of 2016, which were included in assets of business held for sale on the Consolidated Balance Sheet at March 31, 2017 and December 31, 2016.
- (9) and in the fourth quarter of 2016, which were included in assets of business held for sale on the Consolidated Balance Sheet at March 31, 2017 and December 31, 2016.
- (10) Risk-based capital ratios are reported under Basel 3 Advanced - Transition. For additional information, see Capital Management on page 28.

Table 6 Selected Quarterly Financial Data (continued)

(Dollars in millions)	2017 Quarters		2016 Quarters			
	Second	First	Fourth	Third	Second	
Average balance sheet						
Total loans and leases	\$914,717	\$914,144	\$908,396	\$900,594	\$899,670	
Total assets	2,269,153	2,231,420	2,208,039	2,189,490	2,188,241	
Total deposits	1,256,838	1,256,632	1,250,948	1,227,186	1,213,291	
Long-term debt	224,019	221,468	220,587	227,269	233,061	
Common shareholders' equity	246,003	242,883	245,139	243,679	240,376	
Total shareholders' equity	271,223	268,103	270,360	268,899	265,354	
Asset quality <sup>(3)</sup>						
Allowance for credit losses <sup>(4)</sup>	\$11,632	\$11,869	\$11,999	\$12,459	\$12,587	
Nonperforming loans, leases and foreclosed properties <sup>(5)</sup>	7,127	7,637	8,084	8,737	8,799	
Allowance for loan and lease losses as a percentage of total loans and leases outstanding <sup>(5, 6)</sup>	1.20	% 1.25	% 1.26	% 1.30	% 1.32	%
Allowance for loan and lease losses as a percentage of total nonperforming loans and leases <sup>(5, 6)</sup>	160	156	149	140	142	
Allowance for loan and lease losses as a percentage of total nonperforming loans and leases, excluding the PCI loan portfolio <sup>(5, 6)</sup>	154	150	144	135	135	
Amounts included in allowance for loan and lease losses for loans and leases that are excluded from nonperforming loans and leases <sup>(7)</sup>	\$3,782	\$4,047	\$3,951	\$4,068	\$4,087	
Allowance for loan and lease losses as a percentage of total nonperforming loans and leases, excluding the allowance for loan and lease losses for loans and leases that are excluded from nonperforming loans and leases <sup>(5, 7)</sup>	104	% 100	% 98	% 91	% 93	%
Net charge-offs <sup>(8, 9)</sup>	\$908	\$934	\$880	\$888	\$985	
Annualized net charge-offs as a percentage of average loans and leases outstanding <sup>(5, 8)</sup>	0.40	% 0.42	% 0.39	% 0.40	% 0.44	%
Annualized net charge-offs as a percentage of average loans and leases outstanding, excluding the PCI loan portfolio <sup>(5)</sup>	0.41	0.42	0.39	0.40	0.45	
Annualized net charge-offs and PCI write-offs as a percentage of average loans and leases outstanding <sup>(5)</sup>	0.43	0.43	0.42	0.43	0.48	
Nonperforming loans and leases as a percentage of total loans and leases outstanding <sup>(5, 6)</sup>	0.75	0.80	0.85	0.93	0.94	
Nonperforming loans, leases and foreclosed properties as a percentage of total loans, leases and foreclosed properties <sup>(5, 6)</sup>	0.78	0.84	0.89	0.97	0.98	
Ratio of the allowance for loan and lease losses at period end to annualized net charge-offs <sup>(6, 8)</sup>	2.99	3.00	3.28	3.31	2.99	
Ratio of the allowance for loan and lease losses at period end to annualized net charge-offs, excluding the PCI loan portfolio <sup>(6)</sup>	2.88	2.88	3.16	3.18	2.85	
	2.82	2.90	3.04	3.03	2.76	



Ratio of the allowance for loan and lease losses at period end to annualized net charge-offs and PCI write-offs <sup>(6)</sup>

Capital ratios at period end <sup>(10)</sup>

Risk-based capital:

Common equity tier 1 capital	11.6	% 11.0	% 11.0	% 11.0	% 10.6	%
Tier 1 capital	13.2	12.5	12.4	12.4	12.0	
Total capital	15.1	14.4	14.3	14.2	13.9	
Tier 1 leverage	8.9	8.8	8.9	9.1	8.9	
Tangible equity <sup>(2)</sup>	9.2	9.1	9.2	9.4	9.3	
Tangible common equity <sup>(2)</sup>	8.0	7.9	8.1	8.2	8.1	

For footnotes see page 7.

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Table 7 Selected Year-to-Date Financial Data

(In millions, except per share information)	Six Months Ended June	
	2017	2016
Income statement		
Net interest income	\$22,044	\$20,603
Noninterest income	23,033	21,473
Total revenue, net of interest expense	45,077	42,076
Provision for credit losses	1,561	1,973
Noninterest expense	28,574	28,309
Income before income taxes	14,942	11,794
Income tax expense	4,817	3,539
Net income	10,125	8,255
Net income applicable to common shareholders	9,262	7,437
Average common shares issued and outstanding	10,056	10,308
Average diluted common shares issued and outstanding	10,868	11,080
Performance ratios		
Return on average assets	0.91	% 0.76 %
Return on average common shareholders' equity	7.64	6.26
Return on average tangible common shareholders' equity <sup>(1)</sup>	10.76	8.95
Return on average shareholder's equity	7.57	6.31
Return on average tangible shareholders' equity <sup>(1)</sup>	10.27	8.68
Total ending equity to total ending assets	12.02	12.23
Total average equity to total average assets	11.98	12.05
Dividend payout	16.25	13.92
Per common share data		
Earnings	\$0.92	\$0.72
Diluted earnings	0.87	0.68
Dividends paid	0.15	0.10
Book value	24.88	23.71
Tangible book value <sup>(1)</sup>	17.78	16.71
Market price per share of common stock		
Closing	\$24.26	\$13.27
High closing	25.50	16.43
Low closing	22.05	11.16
Market capitalization	\$239,643	\$135,577

Tangible equity ratios and tangible book value per share of common stock are non-GAAP financial measures. For

(1) more information on these ratios and for corresponding reconciliations to GAAP financial measures, see Non-GAAP Reconciliations on page 67.

(2) For more information on the impact of the PCI loan portfolio on asset quality, see Consumer Portfolio Credit Risk Management on page 39.

(3) Includes the allowance for loan and lease losses and the reserve for unfunded lending commitments.

(4)

Balances and ratios do not include loans accounted for under the fair value option. For additional exclusions from nonperforming loans, leases and foreclosed properties, see Consumer Portfolio Credit Risk Management – Nonperforming Consumer Loans, Leases and Foreclosed Properties Activity on page 47 and corresponding Table 33, and Commercial Portfolio Credit Risk Management – Nonperforming Commercial Loans, Leases and Foreclosed Properties Activity on page 52 and corresponding Table 40.

- (5) Primarily includes amounts allocated to the U.S. credit card and unsecured consumer lending portfolios in Consumer Banking, PCI loans and the non-U.S. credit card portfolio in All Other.  
Net charge-offs exclude \$88 million and \$187 million of write-offs in the PCI loan portfolio for the six months
- (6) ended June 30, 2017 and 2016. For more information on PCI write-offs, see Consumer Portfolio Credit Risk Management – Purchased Credit-impaired Loan Portfolio on page 45.

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Selected Year-to-Date  
Table 7 Financial Data  
(continued)  
Six Months Ended June  
30

(Dollars in millions)	2017	2016
Average balance sheet		
Total loans and leases	\$914,432	\$896,327
Total assets	2,250,391	2,181,082
Total deposits	1,256,735	1,205,873
Long-term debt	222,751	233,358
Common shareholders' equity	244,452	238,803
Total shareholders' equity	269,672	262,889
Asset quality <sup>(2)</sup>		
Allowance for credit losses <sup>(3)</sup>	\$11,632	\$12,587
Nonperforming loans, leases and foreclosed properties <sup>(4)</sup>	7,127	8,799
Allowance for loan and lease losses as a percentage of total loans and	20 %	1.32 %

leases outstanding <sup>(4)</sup> Allowance for loan and lease losses as a percentage of total nonperforming loans and leases <sup>(4)</sup> Allowance for loan and lease losses as a percentage of total nonperforming loans and leases, excluding the PCI loan portfolio <sup>(4)</sup> Amounts included in allowance for loan and lease losses for loans and leases that are excluded from nonperforming loans and leases <sup>(5)</sup> Allowance for loan and	160	142	
	154	135	
	\$3,782	\$4,087	
	104	% 93	%

lease losses as a percentage of total nonperforming loans and leases, excluding the allowance for loan and lease losses for loans and leases that are excluded from nonperforming loans and leases (4, 5)

Net charge-offs \$1,842 \$2,053 (6)

Annualized net charge-offs as a percentage of average loans and leases outstanding (4, 6)

0.41 % 0.46 %  
 Annualized net charge-offs as a percentage of average loans and

leases outstanding, excluding the PCI loan portfolio (4) Annualized net charge-offs and PCI write-offs as a percentage of average loans and leases outstanding (4)	0.43	0.51
Nonperforming loans and leases as a percentage of total loans and leases outstanding (4)	0.75	0.94
Nonperforming loans, leases and foreclosed properties as a percentage of total loans, leases and foreclosed properties (4)	0.78	0.98
Ratio of the allowance for loan and	2.99	2.99

lease  
 losses at  
 period  
 end to  
 annualized  
 net  
 charge-offs  
 (6)

Ratio of  
 the  
 allowance  
 for loan  
 and  
 lease

losses at  
 period 2.88          2.85  
 end to  
 annualized

net  
 charge-offs,  
 excluding  
 the PCI  
 loan  
 portfolio

Ratio of  
 the  
 allowance  
 for loan  
 and  
 lease

losses at 2.82          2.76  
 period  
 end to  
 annualized

net  
 charge-offs  
 and PCI  
 write-offs

For footnotes see page 9.



### Supplemental Financial Data

In this Form 10-Q, we present certain non-GAAP financial measures. Non-GAAP financial measures exclude certain items or otherwise include components that differ from the most directly comparable measures calculated in accordance with GAAP. Non-GAAP financial measures are provided as additional useful information to assess our financial condition, results of operations (including period-to-period operating performance) or compliance with prospective regulatory requirements. These non-GAAP financial measures are not intended as a substitute for GAAP financial measures and may not be defined or calculated the same way as non-GAAP financial measures used by other companies.

We view net interest income and related ratios and analyses on an fully taxable-equivalent (FTE) basis, which when presented on a consolidated basis, are non-GAAP financial measures. To derive the FTE basis, net interest income is adjusted to reflect tax-exempt income on an equivalent before-tax basis with a corresponding increase in income tax expense. For purposes of this calculation, we use the federal statutory tax rate of 35 percent and a representative state tax rate. In addition, certain performance measures including the efficiency ratio and net interest yield utilize net interest income (and thus total revenue) on an FTE basis. The efficiency ratio measures the costs expended to generate a dollar of revenue, and net interest yield measures the bps we earn over the cost of funds. We believe that presentation of these items on an FTE basis allows for comparison of amounts from both taxable and tax-exempt sources and is consistent with industry practices.

We may present certain key performance indicators and ratios excluding certain items (e.g., debit valuation adjustment (DVA)) which result in non-GAAP financial measures. We believe that the presentation of measures that exclude these items are useful because they provide additional information to assess the underlying operational performance and trends of our businesses and to allow better comparison of period-to-period operating performance.

We also evaluate our business based on certain ratios that utilize tangible equity, a non-GAAP financial measure. Tangible equity represents an adjusted shareholders' equity or common shareholders' equity amount which has been reduced by goodwill and certain acquired intangible assets (excluding mortgage servicing rights (MSRs)), net of related deferred tax liabilities. These measures are used to evaluate our use of equity. In addition, profitability, relationship and investment models use both return on average tangible common shareholders' equity and return on average tangible shareholders' equity as key measures to support our overall growth goals. These ratios are as follows: Return on average tangible common shareholders' equity measures our earnings contribution as a percentage of adjusted common shareholders' equity. The tangible common equity ratio represents adjusted ending common shareholders' equity divided by total assets less goodwill and certain acquired intangible assets (excluding MSRs), net of related deferred tax liabilities.

Return on average tangible shareholders' equity measures our earnings contribution as a percentage of adjusted average total shareholders' equity. The tangible equity ratio represents adjusted ending shareholders' equity divided by total assets less goodwill and certain acquired intangible assets (excluding MSRs), net of related deferred tax liabilities.

Tangible book value per common share represents adjusted ending common shareholders' equity divided by ending common shares outstanding.

We believe that the use of ratios that utilize tangible equity provides additional useful information because they present measures of those assets that can generate income. Tangible book value per share provides additional useful information about the level of tangible assets in relation to outstanding shares of common stock.

The aforementioned supplemental data and performance measures are presented in Tables 6 and 7. Table 8 presents certain non-GAAP financial measures and performance measurements on an FTE basis.

Table 8 Supplemental Financial Data

	Three Months Ended		Six Months Ended	
	June 30		June 30	
(Dollars in millions)	2017	2016	2017	2016
Fully taxable-equivalent basis data				

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Net interest income	\$11,223	\$10,341	\$22,478	\$21,041
Total revenue, net of interest expense	23,066	21,509	45,511	42,514
Net interest yield	2.34	% 2.23	% 2.37	% 2.28
Efficiency ratio	59.51	62.73	62.78	66.59

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Table 9 Quarterly Average Balances and Interest Rates – FTE Basis

(Dollars in millions)	Second Quarter 2017			Second Quarter 2016		
	Average Balance	Interest Income/ Expense	Yield/ Rate	Average Balance	Interest Income/ Expense	Yield/ Rate
Earning assets						
Interest-bearing deposits with the Federal Reserve, non-U.S. central banks and other banks	\$129,201	\$261	0.81 %	\$135,312	\$157	0.47 %
Time deposits placed and other short-term investments	11,448	58	2.03	7,855	35	1.79
Federal funds sold and securities borrowed or purchased under agreements to resell	226,700	560	0.99	223,005	260	0.47
Trading account assets	135,931	1,199	3.54	127,189	1,109	3.50
Debt securities (1)	431,132	2,632	2.44	419,085	2,284	2.20
Loans and leases (2):						
Residential mortgage	195,935	1,697	3.46	186,752	1,626	3.48
Home equity	63,332	664	4.20	73,141	703	3.86

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U.S. credit card	89,464	2,128	9.54	86,705	1,983	9.20
Non-U.S. credit card <sup>(1)</sup>	6,494	147	9.08	9,988	250	10.06
Direct/Indirect consumer <sup>(3)</sup>	93,146	643	2.77	91,643	563	2.47
Other consumer <sup>(4)</sup>	2,629	26	4.07	2,220	16	3.00
Total consumer	451,000	5,305	4.71	450,449	5,141	4.58
U.S. commercial real estate <sup>(5)</sup>	291,162	2,403	3.31	276,640	2,006	2.92
Commercial lease financing	58,198	514	3.54	57,772	434	3.02
Non-U.S. commercial	21,649	156	2.89	20,874	147	2.81
Total commercial	92,708	615	2.66	93,935	564	2.42
Total loans and leases	463,717	3,688	3.19	449,221	3,151	2.82
Other earning assets	914,717	8,993	3.94	899,670	8,292	3.70
Total earning assets <sup>(6)</sup>	73,618	680	3.70	55,957	660	4.74
Cash and due from banks <sup>(1)</sup>	1,922,747	14,383	3.00	1,868,073	12,797	2.75
Other assets, less allowance for loan and lease losses <sup>(1)</sup>	27,659			27,924		
Total assets	318,747			292,244		
Interest-bearing liabilities	\$2,269,153			\$2,188,241		

U.S. interest-bearing deposits:						
Savings	\$54,494	\$2	0.01 %	\$50,105	\$1	0.01 %
NOW and money market deposit accounts	619,593	105	0.07	583,913	72	0.05
Consumer CDs and IRAs	45,682	30	0.27	48,450	33	0.28
Negotiable CDs, public funds and other deposits	36,041	68	0.75	32,879	35	0.42
Total U.S. interest-bearing deposits	755,810	205	0.11	715,347	141	0.08
Non-U.S. interest-bearing deposits:						
Banks located in non-U.S. countries	3,058	6	0.77	4,235	10	0.98
Governments and official institutions	981	2	0.90	1,542	2	0.66
Time, savings and other Total	60,047	133	0.89	60,311	92	0.61
non-U.S. interest-bearing deposits	64,086	141	0.89	66,088	104	0.63
Total interest-bearing deposits	819,896	346	0.17	781,435	245	0.13
Federal funds purchased, securities	251,641	917	1.46	215,852	626	1.17

loaned or sold under agreements to repurchase and short-term borrowings						
Trading account	45,156	307	2.73	36,652	242	2.66
liabilities						
Long-term debt	224,019	1,590	2.84	233,061	1,343	2.31
Total interest-bearing liabilities <sup>(6)</sup>	271,223	3,160	0.94	1,267,000	2,456	0.78
Noninterest-bearing sources:						
Noninterest-bearing deposits	436,942			431,856		
Other liabilities	220,276			224,031		
Shareholders' equity	271,223			265,354		
Total liabilities and shareholders' equity	\$2,269,153			\$2,188,241		
Net interest spread			2.06 %			1.97 %
Impact of noninterest-bearing sources			0.28			0.26
Net interest income/yield on earning assets		\$11,223	2.34 %		\$10,341	2.23 %

Includes assets of the Corporation's non-U.S. consumer credit card business, which were previously included in  
(1) assets of business held for sale on the Consolidated Balance Sheet. On June 1, 2017, the Corporation completed the sale of its non-U.S. consumer credit card business.

Nonperforming loans are included in the respective average loan balances. Income on these nonperforming loans is  
(2) generally recognized on a cost recovery basis. PCI loans were recorded at fair value upon acquisition and accrete interest income over the estimated life of the loan.

(3) Includes non-U.S. consumer loans of \$2.9 billion and \$3.4 billion in the second quarter of 2017 and 2016.

(4)

Includes consumer finance loans of \$431 million and \$526 million; consumer leases of \$2.0 billion and \$1.5 billion, and consumer overdrafts of \$167 million and \$166 million in the second quarter of 2017 and 2016, respectively.

- (5) Includes U.S. commercial real estate loans of \$55.0 billion and \$54.3 billion, and non-U.S. commercial real estate loans of \$3.2 billion and \$3.5 billion in the second quarter of 2017 and 2016, respectively.

Interest income includes the impact of interest rate risk management contracts, which decreased interest income on the underlying assets by \$24 million and \$56 million in the second quarter of 2017 and 2016. Interest expense

- (6) includes the impact of interest rate risk management contracts, which decreased interest expense on the underlying liabilities by \$326 million and \$610 million in the second quarter of 2017 and 2016. For additional information, see Interest Rate Risk Management for the Banking Book on page 63.

Table 10 Year-to-Date Average Balances and Interest Rates – FTE Basis

	Six Months Ended June 30			2016		
	2017	2016	2015	2016	2015	2014
(Dollars in millions)	Average Balance	Interest Income/Expense	Yield/Rate	Average Balance	Interest Income/Expense	Yield/Rate
Earning assets						
Interest-bearing deposits with the Federal Reserve, non-U.S. central banks and other banks	\$126,576	\$463	0.74%	\$136,943	\$312	0.46%
Time deposits placed and other short-term investments	11,472	105	1.84	8,506	67	1.59
Federal funds sold and securities borrowed or purchased under agreements to resell	221,579	999	0.91	216,094	536	0.50
Trading account assets	130,824	2,310	3.56	131,748	2,321	3.54
Debt securities (1)	430,685	5,205	2.41	409,531	4,821	2.38
Loans and leases (2):						
Residential mortgage	194,787	3,358	3.45	186,866	3,255	3.48
Home equity	64,414	1,303	4.07	74,235	1,414	3.82
	89,545	4,239	9.55	86,934	4,004	9.26



U.S. credit card						
Non-U.S. credit card <sup>(1)</sup>	7,923	358	9.12	9,905	503	10.21
Direct/Indirect consumer <sup>(3)</sup>	93,218	1,251	2.71	90,493	1,113	2.47
Other consumer <sup>(4)</sup>	2,589	53	4.07	2,178	32	3.01
Total consumer	452,476	10,562	4.69	450,611	10,321	4.60
U.S. commercial	289,325	4,625	3.22	273,576	3,942	2.90
Commercial real estate <sup>(5)</sup>	57,982	993	3.45	57,521	868	3.03
Commercial lease financing	21,885	387	3.54	20,975	329	3.14
Non-U.S. commercial	92,764	1,210	2.63	93,644	1,149	2.47
Total commercial	461,956	7,215	3.15	445,716	6,288	2.84
Total loans and leases	914,432	17,777	3.91	896,327	16,609	3.72
Other earning assets	73,568	1,431	3.92	57,298	1,354	4.75
Total earning assets <sup>(6)</sup>	1,909,136	28,290	2.98	1,856,447	26,020	2.81
Cash and due from banks <sup>(1)</sup>	27,429			28,384		
Other assets, less allowance for loan and lease losses <sup>(1)</sup>	313,826			296,251		
Total assets	\$2,250,391			\$2,181,082		
Interest-bearing liabilities						
U.S. interest-bearing deposits:						
Savings	\$53,350	\$3	0.01 %	\$48,975	\$2	0.01 %

NOW and money market deposit accounts	618,676	179	0.06	580,846	143	0.05
Consumer CDs and IRAs	46,194	61	0.27	49,034	68	0.28
Negotiable CDs, public funds and other deposits	34,874	120	0.69	32,308	64	0.40
Total U.S. interest-bearing deposits	753,094	363	0.10	711,163	277	0.08
Non-U.S. interest-bearing deposits:						
Banks located in non-U.S. countries	2,838	11	0.76	4,179	19	0.91
Governments and official institutions	997	4	0.85	1,507	4	0.60
Time, savings and other	59,237	250	0.85	58,627	170	0.58
Total non-U.S. interest-bearing deposits	63,072	265	0.85	64,313	193	0.60
Total interest-bearing deposits	816,166	628	0.16	775,476	470	0.12
Federal funds purchased, securities loaned or sold under agreements to repurchase and	241,733	1,564	1.30	218,921	1,239	1.14

short-term borrowings						
Trading account	41,962	571	2.74	38,027	534	2.83
liabilities						
Long-term debt	222,751	3,049	2.75	233,358	2,736	2.35
Total interest-bearing liabilities <sup>(6)</sup>	312,612	5,812	0.88	1,265,782	4,979	0.79
Noninterest-bearing sources:						
Noninterest-bearing deposits	440,569			430,397		
Other liabilities	217,538			222,014		
Shareholders' equity	269,672			262,889		
Total liabilities and shareholders' equity	\$2,250,391			\$2,181,082		
Net interest spread			2.10 %			2.02 %
Impact of noninterest-bearing sources			0.27			0.26
Net interest income/yield on earning assets		\$22,478	2.37 %		\$21,041	2.28 %

(1) Includes assets of the Corporation's non-U.S. consumer credit card business, which were previously included in assets of business held for sale on the Consolidated Balance Sheet. On June 1, 2017, the Corporation completed the sale of its non-U.S. consumer credit card business.

(2) Nonperforming loans are included in the respective average loan balances. Income on these nonperforming loans is generally recognized on a cost recovery basis. PCI loans were recorded at fair value upon acquisition and accrete interest income over the estimated life of the loan.

(3) Includes non-U.S. consumer loans of \$2.9 billion and \$3.6 billion for the six months ended June 30, 2017 and 2016.

(4) Includes consumer finance loans of \$442 million and \$538 million; consumer leases of \$2.0 billion and \$1.5 billion, and consumer overdrafts of \$168 million and \$163 million for the six months ended June 30, 2017 and 2016, respectively.

(5) Includes U.S. commercial real estate loans of \$54.8 billion and \$54.1 billion, and non-U.S. commercial real estate loans of \$3.2 billion and \$3.5 billion for the six months ended June 30, 2017 and 2016, respectively.

(6) Interest income includes the impact of interest rate risk management contracts, which decreased interest income on the underlying assets by \$41 million and \$91 million for the six months ended June 30, 2017 and 2016. Interest expense includes the impact of interest rate risk management contracts, which decreased interest expense on the

underlying liabilities by \$750 million and \$1.2 billion for the six months ended June 30, 2017 and 2016. For additional information, see Interest Rate Risk Management for the Banking Book on page 63.

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## Business Segment Operations

## Segment Description and Basis of Presentation

We report our results of operations through the following four business segments: Consumer Banking, GWIM, Global Banking and Global Markets, with the remaining operations recorded in All Other. We periodically review capital allocated to our businesses and allocate capital annually during the strategic and capital planning processes. We utilize a methodology that considers the effect of regulatory capital requirements in addition to internal risk-

based capital models. Our internal risk-based capital models use a risk-adjusted methodology incorporating each segment's credit, market, interest rate, business and operational risk components. For more information on the nature of these risks, see Managing Risk on page 28. For more information on the basis of presentation for business segments and reconciliations to consolidated total revenue, net income and period-end total assets, see Note 17 – Business Segment Information to the Consolidated Financial Statements.

## Consumer Banking

	Three Months Ended June 30				Total Consumer Banking		% Change	
	Deposits		Consumer Lending		2017	2016		
(Dollars in millions)	2017	2016	2017	2016	2017	2016		
Net interest income (FTE basis)	\$3,302	\$2,618	\$2,658	\$2,589	\$5,960	\$5,207	14	%
Noninterest income:								
Card income	2	2	1,247	1,214	1,249	1,216	3	
Service charges	1,061	1,011	1	—	1,062	1,011	5	
Mortgage banking income <sup>(1)</sup>	—	—	140	267	140	267	(48	)
All other income (loss)	93	99	4	(5	) 97	94	3	
Total noninterest income	1,156	1,112	1,392	1,476	2,548	2,588	(2	)
Total revenue, net of interest expense (FTE basis)	4,458	3,730	4,050	4,065	8,508	7,795	9	
Provision for credit losses	45	41	789	685	834	726	15	
Noninterest expense	2,558	2,380	1,851	2,038	4,409	4,418	<1	
Income before income taxes (FTE basis)	1,855	1,309	1,410	1,342	3,265	2,651	23	
Income tax expense (FTE)	700	482	533	495	1,233	977	26	

basis)							
Net income	\$1,155	\$827	\$877	\$847	\$2,032	\$1,674	21
Net interest yield (FTE basis)	2.03	% 1.77	% 4.15	% 4.34	% 3.48	% 3.34	%
Return on average allocated capital	39	28	14	15	22	20	
Efficiency ratio (FTE basis)	57.38	63.77	45.72	50.16	51.83	56.67	

## Balance Sheet

Average	Three Months Ended June 30						% Change
	2017	2016	2017	2016	2017	2016	
Total loans and leases	\$5,016	\$4,792	\$256,521	\$238,129	\$261,537	\$242,921	8 %
Total earning assets <sup>(2)</sup>	651,677	594,748	257,130	239,645	686,064	627,225	9
Total assets <sup>(2)</sup>	678,816	621,445	268,680	250,819	724,753	665,096	9
Total deposits	646,474	589,294	6,313	7,177	652,787	596,471	9
Allocated capital	12,000	12,000	25,000	22,000	37,000	34,000	9

Total consolidated mortgage banking income of \$230 million and \$352 million for the three and six months ended

(1) June 30, 2017 was recorded primarily in Consumer Lending and All Other, compared to \$312 million and \$745 million for the same periods in 2016.

In segments and businesses where the total of liabilities and equity exceeds assets, we allocate assets from All

(2) Other to match the segments' and businesses' liabilities and allocated shareholders' equity. As a result, total earning assets and total assets of the businesses may not equal total Consumer Banking.

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(Dollars in millions)	Six Months Ended June 30							% Change	%
	Deposits		Consumer Lending		Total Consumer Banking				
	2017	2016	2017	2016	2017	2016			
Net interest income (FTE basis)	\$6,365	\$ 5,310	\$5,376	\$ 5,225	\$11,741	\$ 10,535	11		
Noninterest income:									
Card income	4	5	2,469	2,422	2,473	2,427	2		
Service charges	2,111	2,008	1	—	2,112	2,008	5		
Mortgage banking income <sup>(1)</sup>	—	—	259	457	259	457	(43	)	
All other income	195	214	12	11	207	225	(8	)	
Total noninterest income	2,310	2,227	2,741	2,890	5,051	5,117	(1	)	
Total revenue, net of interest expense (FTE basis)	8,675	7,537	8,117	8,115	16,792	15,652	7		
Provision for credit losses	100	89	1,572	1,168	1,672	1,257	33		
Noninterest expense	5,084	4,837	3,734	4,122	8,818	8,959	(2	)	
Income before income taxes (FTE basis)	3,491	2,611	2,811	2,825	6,302	5,436	16		
Income tax expense (FTE basis)	1,317	961	1,061	1,039	2,378	2,000	19		
Net income	\$2,174	\$ 1,650	\$ 1,750	\$ 1,786	\$3,924	\$ 3,436	14		
Net interest yield (FTE basis)	2.00	% 1.82	% 4.24	% 4.43	% 3.49	% 3.43	%		
Return on average allocated capital	37	28	14	16	21	20			
Efficiency ratio (FTE basis)	58.62	64.18	46.00	50.79	52.52	57.24			

## Balance Sheet

Average	Six Months Ended June 30						% Change
	2017	2016	2017	2016	2017	2016	
Total loans and leases	\$4,998	\$ 4,761	\$254,753	\$ 235,653	\$259,751	\$ 240,414	8 %
Total earning assets <sup>(2)</sup>	643,237	585,691	255,607	237,003	677,512	617,263	10
Total assets <sup>(2)</sup>	670,340	612,437	267,239	248,800	716,247	655,806	9
Total deposits	637,953	580,378	6,285	6,954	644,238	587,332	10
Allocated capital	12,000	12,000	25,000	22,000	37,000	34,000	9

  

Period end	June 30		December 31		June 30		December 31		% Change
	2017	2016	2017	2016	2017	2016	2016		
Total loans and leases	\$5,039	\$ 4,938	\$260,899	\$ 254,053	\$265,938	\$ 258,991		3 %	
Total earning assets <sup>(2)</sup>	661,576	631,172	261,696	255,511	696,350	662,698		5	
Total assets <sup>(2)</sup>	688,800	658,316	273,298	268,002	735,176	702,333		5	
Total deposits	656,374	625,727	6,304	7,059	662,678	632,786		5	

See page 14 for footnotes.

Consumer Banking, which is comprised of Deposits and Consumer Lending, offers a diversified range of credit, banking and investment products and services to consumers and small businesses. Our customers and clients have access to a coast to coast network including financial centers in 33 states and the District of Columbia. Our network includes approximately 4,500 financial centers, 16,000 ATMs, nationwide call centers, and online and mobile platforms.

## Consumer Banking Results

## Three Months Ended June 30, 2017 Compared to Three Months Ended June 30, 2016

Net income for Consumer Banking increased \$358 million to \$2.0 billion primarily driven by higher net interest income, partially offset by higher provision for credit losses. Net interest income increased \$753 million to \$6.0 billion primarily due to the beneficial impact of an increase in investable assets as a result of higher deposits and pricing discipline. Noninterest income decreased \$40 million to \$2.5 billion primarily driven by lower mortgage banking income, partially offset by higher service charges and card income.

The provision for credit losses increased \$108 million to \$834 million due to portfolio seasoning and loan growth in the U.S. credit

card portfolio. Noninterest expense of \$4.4 billion remained relatively unchanged.

The return on average allocated capital was 22 percent, up from 20 percent, as higher net income was partially offset by an increased capital allocation. For more information on capital allocations, see Business Segment Operations on page 14.

## Six Months Ended June 30, 2017 compared to Six Months Ended June 30, 2016

Net income for Consumer Banking increased \$488 million to \$3.9 billion primarily driven by higher net interest income and lower noninterest expense, partially offset by higher provision for credit losses. Net interest income increased \$1.2 billion to \$11.7 billion primarily due to the beneficial impact of an increase in investable assets as a result of higher deposits and pricing discipline. Noninterest income decreased \$66 million to \$5.1 billion driven by the same factors as described in the three-month discussion.

The provision for credit losses increased \$415 million to \$1.7 billion due to portfolio seasoning and loan growth in the U.S. credit card portfolio. Noninterest expense decreased \$141 million to \$8.8 billion driven by improved operating efficiencies, partially offset by higher FDIC expense.

The return on average allocated capital was 21 percent, up from 20 percent, as higher net income was partially offset by an increased capital allocation. For more information on capital allocations, see Business Segment Operations on



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## Deposits

Deposits includes the results of consumer deposit activities which consist of a comprehensive range of products provided to consumers and small businesses. Our deposit products include traditional savings accounts, money market savings accounts, CDs and IRAs, noninterest- and interest-bearing checking accounts, as well as investment accounts and products. Net interest income is allocated to the deposit products using our funds transfer pricing process that matches assets and liabilities with similar interest rate sensitivity and maturity characteristics. Deposits generates fees such as account service fees, non-sufficient funds fees, overdraft charges and ATM fees, as well as investment and brokerage fees from Merrill Edge accounts. Merrill Edge is an integrated investing and banking service targeted at customers with less than \$250,000 in investable assets. Merrill Edge provides investment advice and guidance, client brokerage asset services, a self-directed online investing platform and key banking capabilities including access to the Corporation's network of financial centers and ATMs.

Deposits includes the net impact of migrating customers and their related deposit and brokerage asset balances between Deposits and GWIM as well as other client-managed businesses. For more information on the migration of customer balances to or from GWIM, see GWIM – Net Migration Summary on page 20.

Three Months Ended June 30, 2017 Compared to Three Months Ended June 30, 2016

Net income for Deposits increased \$328 million to \$1.2 billion driven by higher revenue, partially offset by higher noninterest expense. Net interest income increased \$684 million to \$3.3

billion primarily due to the beneficial impact of an increase in investable assets as a result of higher deposits and pricing discipline. Noninterest income increased \$44 million to \$1.2 billion primarily due to higher service charges. The provision for credit losses increased \$4 million to \$45 million. Noninterest expense increased \$178 million to \$2.6 billion primarily driven by investments in initiatives such as financial center renovations and builds, higher FDIC expense and increased personnel expense from higher levels of primary sales professionals.

Average deposits increased \$57.2 billion to \$646.5 billion driven by strong organic growth. Growth in checking, traditional savings and money market savings of \$60.3 billion was partially offset by a decline in time deposits of \$3.2 billion.

Six Months Ended June 30, 2017 compared to Six Months Ended June 30, 2016

Net income for Deposits increased \$524 million to \$2.2 billion. Net interest income increased \$1.1 billion to \$6.4 billion and noninterest income increased \$83 million to \$2.3 billion, both of which were primarily driven by the same factors as described in the three-month discussion. The prior-year period also included gains on certain divestitures. The provision for credit losses increased \$11 million to \$100 million. Noninterest expense increased \$247 million to \$5.1 billion primarily driven by the same factors as described in the three-month discussion.

Average deposits increased \$57.6 billion to \$638.0 billion primarily driven by the same factor as described in the three-month discussion.

## Key Statistics – Deposits

	Three Months Ended June 30		Six Months Ended June 30		
	2017	2016	2017	2016	
Total deposit spreads (excludes noninterest costs) <sup>(1)</sup>	1.89%	1.66%	1.78	% 1.65	%

## Period end

Client brokerage assets (in millions)	\$ 159,131	\$ 131,698
Digital banking active users (units in thousands) <sup>(2)</sup>	33,971	32,187
Mobile banking active users (units in thousands)	22,898	20,227
Financial centers	4,542	4,681
ATMs	15,972	15,998

<sup>(1)</sup> Includes deposits held in Consumer Lending.

(2) Digital users represents mobile and/or online users across consumer businesses; historical information has been reclassified primarily due to the sale of the Corporation's non-U.S. consumer credit card business.

Client brokerage assets increased \$27.4 billion driven by strong client flows and market performance. Mobile banking active users increased 3 million reflecting continuing changes in our customers' banking preferences. The number of financial centers

declined 139 driven by changes in customer preferences to self-service options as we continue to optimize our consumer banking network and improve our cost-to-serve.

#### Consumer Lending

Consumer Lending offers products to consumers and small businesses across the U.S. The products offered include credit and debit cards, residential mortgages and home equity loans, and direct and indirect loans such as automotive, recreational vehicle and consumer personal loans. In addition to earning net interest spread revenue on its lending activities, Consumer Lending generates interchange revenue from credit and debit card transactions, late fees, cash advance fees, annual credit card fees,

mortgage banking fee income and other miscellaneous fees. Consumer Lending products are available to our customers through our retail network, direct telephone, and online and mobile channels. Consumer Lending results also include the impact of servicing residential mortgages and home equity loans in the core portfolio, including loans held on the balance sheet of Consumer Lending and loans serviced for others.

We classify consumer real estate loans as core or non-core based on loan and customer characteristics such as origination date, product type, loan-to-value (LTV), Fair Isaac Corporation (FICO) score and delinquency status. For more information on the core and non-core portfolios, see Consumer Portfolio Credit Risk Management on page 39. At June 30, 2017, total owned loans in the core portfolio held in Consumer Lending were \$108.2 billion, an increase of \$12.8 billion from June 30, 2016, primarily driven

by higher residential mortgage balances, partially offset by a decline in home equity balances.

Consumer Lending includes the net impact of migrating customers and their related loan balances between Consumer Lending and GWIM. For more information on the migration of customer balances to or from GWIM, see GWIM – Net Migration Summary on page 20.

Three Months Ended June 30, 2017 Compared to Three Months Ended June 30, 2016

Net income for Consumer Lending increased \$30 million to \$877 million driven by lower noninterest expense and higher net interest income, partially offset by higher provision for credit losses and lower noninterest income. Net interest income increased \$69 million to \$2.7 billion primarily driven by the impact of an increase in loan balances. Noninterest income decreased \$84 million to \$1.4 billion driven by lower mortgage banking income, partially offset by higher card income.

The provision for credit losses increased \$104 million to \$789 million due to portfolio seasoning and loan growth in the U.S. credit card portfolio. Noninterest expense decreased \$187 million to \$1.9 billion primarily driven by improved operating efficiencies.

Average loans increased \$18.4 billion to \$256.5 billion primarily driven by increases in residential mortgages, as well as consumer vehicle and U.S. credit card loans, partially offset by lower home equity loan balances.

Six Months Ended June 30, 2017 compared to Six Months Ended June 30, 2016

Net income for Consumer Lending decreased \$36 million to \$1.8 billion driven by higher provision for credit losses and lower noninterest income, partially offset by lower noninterest expense and higher net interest income. Net interest income increased \$151 million to \$5.4 billion. Noninterest income decreased \$149 million to \$2.7 billion. Fluctuations were driven by the same factors as described in the three-month discussion.

The provision for credit losses increased \$404 million to \$1.6 billion due to portfolio seasoning and loan growth in the U.S. credit card portfolio. Noninterest expense decreased \$388 million to \$3.7 billion primarily driven by the same factor as described in the three-month discussion.

Average loans increased \$19.1 billion to \$254.8 billion driven by the same factors as described in the three-month discussion.

#### Key Statistics – Consumer Lending

(Dollars in millions)	Three Months Ended June 30		Six Months Ended June 30	
	2017	2016	2017	2016
Total U.S. credit card <sup>(1)</sup>				
Gross interest yield	9.54	% 9.20	% 9.55	% 9.26
Risk-adjusted margin	8.40	8.79	8.65	8.92
New accounts (in thousands)	1,302	1,313	2,486	2,521
Purchase volumes	\$61,665	\$56,667	\$116,986	\$107,821
Debit card purchase volumes	\$75,349	\$72,120	\$145,960	\$141,267

(1) In addition to the U.S. credit card portfolio in Consumer Banking, the remaining U.S. credit card portfolio is in GWIM.

During the three and six months ended June 30, 2017, the total U.S. credit card risk-adjusted margin decreased 39 bps and 27 bps compared to the same periods in 2016, primarily driven by increased net charge-offs and higher credit card rewards costs.

Total U.S. credit card purchase volumes increased \$5.0 billion to \$61.7 billion, and \$9.2 billion to \$117.0 billion, and debit card purchase volumes increased \$3.2 billion to \$75.3 billion, and \$4.7 billion to \$146.0 billion, reflecting higher levels of consumer spending.

#### Mortgage Banking Income

Mortgage banking income in Consumer Banking includes production income and net servicing income. Production income is comprised primarily of revenue from the fair value gains and losses recognized on our interest rate lock commitments (IRLCs) and loans held-for-sale (LHFS), the related secondary market execution, and costs related to

representations and warranties made in the sales transactions along with other obligations incurred in the sales of mortgage loans. Production income for the three and six months ended June 30, 2017 decreased \$115 million to \$67 million, and \$199 million to \$121 million compared

to the same periods in 2016 due to a decision to retain a higher percentage of residential mortgage production in Consumer Banking, as well as the impact of a higher interest rate environment driving lower refinances.

Net servicing income within Consumer Banking includes income earned in connection with servicing activities and MSR valuation adjustments for the core portfolio, net of results from risk management activities used to hedge certain market risks of the MSRs. Net servicing income for the three and six months ended June 30, 2017 decreased \$12 million to \$73 million, and remained relatively unchanged at \$138 million compared to the same periods in 2016.

#### Mortgage Servicing Rights

At June 30, 2017, the core MSR portfolio, held within Consumer Lending, was \$1.8 billion compared to \$1.5 billion at June 30, 2016. The increase was primarily driven by changes in fair value, partially offset by the amortization of expected cash flows, which exceeded additions to the MSR portfolio. For more information on MSRs, see Note 14 – Fair Value Measurements to the Consolidated Financial Statements.

## Key Statistics

	Three Months Ended June 30		Six Months Ended June 30	
(Dollars in millions)	2017	2016	2017	2016
Loan production <sup>(1)</sup> :				
Total <sup>(2)</sup> :				
First mortgage	\$13,251	\$16,314	\$24,693	\$28,937
Home equity	4,685	4,303	8,738	8,108
Consumer Banking:				
First mortgage	\$9,006	\$11,541	\$16,635	\$20,619
Home equity	4,215	3,881	7,882	7,396

(1) The loan production amounts represent the unpaid principal balance of loans and in the case of home equity, the principal amount of the total line of credit.

(2) In addition to loan production in Consumer Banking, there is also first mortgage and home equity loan production in GWIM.

First mortgage loan originations in Consumer Banking and for the total Corporation decreased \$2.5 billion and \$3.1 billion in the three months ended June 30, 2017 compared to the same period in 2016 primarily driven by a higher interest rate environment driving lower first-lien mortgage refinances. First mortgage loan originations in Consumer Banking and for the total Corporation decreased \$4.0 billion and \$4.2 billion in the six months ended June 30, 2017 primarily driven by the same factor as described in the three-month discussion.

Home equity production in Consumer Banking and for the total Corporation increased \$334 million and \$382 million for the three months ended June 30, 2017 compared to the same period in 2016 due to a higher demand in the market based on improving housing trends. Home equity production in Consumer Banking and for the total Corporation increased \$486 million and \$630 million for the six months ended June 30, 2017 primarily driven by the same factor as described in the three-month discussion.

## Global Wealth &amp; Investment Management

(Dollars in millions)	Three Months Ended June 30			Six Months Ended June 30		
	2017	2016	% Change	2017	2016	% Change
Net interest income (FTE basis)	\$1,597	\$1,403	14 %	\$3,157	\$2,916	8 %
Noninterest income:						
Investment and brokerage services	2,697	2,598	4	5,345	5,134	4
All other income	401	424	(5 )	785	844	(7 )
Total noninterest income	3,098	3,022	3	6,130	5,978	3
Total revenue, net of interest expense (FTE	4,695	4,425	6	9,287	8,894	4

basis)

Provision for credit losses	11	14	(21 )	34	39	(13 )
Noninterest expense	3,392	3,285	3	6,722	6,555	3
Income before income taxes (FTE basis)	1,292	1,126	15	2,531	2,300	10
Income tax expense (FTE basis)	488	421	16	955	853	12
Net income	\$804	\$705	14	\$1,576	\$1,447	9

Net interest yield (FTE basis)	2.41	% 2.06	%	2.34	% 2.12	%
Return on average allocated capital	23	22		23	22	
Efficiency ratio (FTE basis)	72.24	74.23		72.38	73.70	

## Balance Sheet

Average	Three Months Ended June 30			Six Months Ended June 30		
	2017	2016	% Change	2017	2016	% Change
Total loans and leases	\$150,812	\$141,180	7 %	\$149,615	\$140,139	7 %
Total earning assets	265,845	273,873	(3 )	271,884	276,739	(2 )
Total assets	281,167	289,645	(3 )	287,266	292,678	(2 )
Total deposits	245,329	254,804	(4 )	251,324	257,643	(2 )
Allocated capital	14,000	13,000	8	14,000	13,000	8

Period end	June 30 2017	December 31 2016	% Change
Total loans and leases	\$153,468	\$148,179	4 %
Total earning assets	258,744	283,151	(9 )
Total assets	274,746	298,931	(8 )
Total deposits	237,131	262,530	(10 )

GWIM consists of two primary businesses: Merrill Lynch Global Wealth Management (MLGWM) and U.S. Trust, Bank of America Private Wealth Management (U.S. Trust).

MLGWM's advisory business provides a high-touch client experience through a network of financial advisors focused on clients with over \$250,000 in total investable assets. MLGWM provides tailored solutions to meet our clients' needs through a full set of investment management, brokerage, banking and retirement products.

U.S. Trust, together with MLGWM's Private Banking & Investments Group, provides comprehensive wealth management solutions targeted to high net worth and ultra high net worth clients, as well as customized solutions to meet clients' wealth structuring, investment management, trust and banking needs, including specialty asset management services.

Three Months Ended June 30, 2017 Compared to Three Months Ended June 30, 2016

Net income for GWIM increased \$99 million to \$804 million due to higher revenue, partially offset by an increase in revenue-related expense. The operating margin was 28 percent compared to 25 percent a year ago.

Net interest income increased \$194 million to \$1.6 billion driven by the impact of higher short-term rates and growth in loan balances. Noninterest income, which primarily includes investment and brokerage services income, increased \$76 million to \$3.1 billion. This increase was driven by higher asset management fees primarily due to higher market valuations and AUM flows, partially offset by lower transactional revenue. Also, the prior-year period included a gain of approximately \$60 million related to the sale of BofA Global Capital Management's AUM. Noninterest expense increased \$107 million to \$3.4 billion

primarily driven by higher revenue-related incentive costs and increased FDIC expense.

The return on average allocated capital was 23 percent, up from 22 percent, as higher net income was partially offset by an increased capital allocation.

MLGWM revenue of \$3.9 billion increased eight percent due to higher net interest income and asset management fees driven by higher market valuations and AUM flows, partially offset by lower transactional revenue. U.S. Trust revenue of \$819 million increased seven percent reflecting higher net interest income and asset management fees driven by higher market valuations.

Six Months Ended June 30, 2017 Compared to Six Months Ended June 30, 2016

Net income for GWIM increased \$129 million to \$1.6 billion due to higher revenue, partially offset by an increase in noninterest expense. The operating margin was 27 percent compared to 26 percent a year ago.

Net interest income increased \$241 million to \$3.2 billion. Noninterest income, which primarily includes investment and brokerage services income, increased \$152 million to \$6.1 billion. Noninterest expense increased \$167 million to \$6.7 billion. These increases were driven by the same factors as described in the three-month discussion.

The return on average allocated capital was 23 percent, up from 22 percent, as higher net income was partially offset by an increased capital allocation.

Revenue from MLGWM of \$7.7 billion increased five percent, and U.S. Trust revenue of \$1.6 billion increased six percent. These increases were due to the same factors as described in the three-month discussion.



## Key Indicators and Metrics

	Three Months Ended		Six Months Ended June	
	June 30		30	
(Dollars in millions, except as noted)	2017	2016	2017	2016
<b>Revenue by Business</b>				
Merrill Lynch Global Wealth Management	\$3,874	\$3,602	\$7,656	\$7,269
U.S. Trust	819	762	1,628	1,539
Other <sup>(1)</sup>	2	61	3	86
Total revenue, net of interest expense (FTE basis)	\$4,695	\$4,425	\$9,287	\$8,894
<b>Client Balances by Business, at period end</b>				
Merrill Lynch Global Wealth Management			\$2,196,238	\$2,026,392
U.S. Trust			421,180	393,089
Total client balances			\$2,617,418	\$2,419,481
<b>Client Balances by Type, at period end</b>				
Assets under management			\$990,709	\$832,394
Brokerage assets			1,104,775	1,070,014
Assets in custody			128,538	120,505
Deposits			237,131	250,976
Loans and leases <sup>(2)</sup>			156,265	145,592
Total client balances			\$2,617,418	\$2,419,481
<b>Assets Under Management Rollforward</b>				
Assets under management, beginning of period	\$946,778	\$890,663	\$886,148	\$900,863
Net client flows <sup>(3)</sup>	27,516	5,885	56,730	1,466
Market valuation/other <sup>(1)</sup>	16,415	(64,154 )	47,831	(69,935 )
Total assets under management, end of period	\$990,709	\$832,394	\$990,709	\$832,394
<b>Associates, at period end <sup>(4, 5)</sup></b>				
Number of financial advisors			17,017	16,824
Total wealth advisors, including financial advisors			18,881	18,668
Total primary sales professionals, including financial advisors and wealth advisors			19,863	19,506
<b>Merrill Lynch Global Wealth Management Metric <sup>(5)</sup></b>				
Financial advisor productivity <sup>(6)</sup> (in thousands)	\$1,040	\$978	\$1,016	\$978

U.S. Trust Metric, at period end <sup>(5)</sup>

Primary sales professionals			1,665	1,648
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Includes the results of BofA Global Capital Management, the cash management division of Bank of America, and

<sup>(1)</sup> certain administrative items. Also reflects the sale to a third party of approximately \$80 billion of BofA Global Capital Management's AUM during the three months ended June 30, 2016.

<sup>(2)</sup> Includes margin receivables which are classified in customer and other receivables on the Consolidated Balance Sheet.

<sup>(3)</sup> For the three and six months ended June 30, 2016, net AUM flows includes \$4.2 billion and \$8.0 billion of net outflows related to BofA Global Capital Management's AUM that were sold during the three months ended June 30, 2016.

<sup>(4)</sup> Includes financial advisors in the Consumer Banking segment of 2,206 and 2,244 at June 30, 2017 and 2016.

(5) Associate computation is based on headcount.

(6) Financial advisor productivity is defined as annualized MLGWM total revenue, excluding the allocation of certain asset and liability management (ALM) activities, divided by the total average number of financial advisors (excluding financial advisors in the Consumer Banking segment).

#### Client Balances

Client balances managed under advisory and/or discretion of GWIM are AUM and are typically held in diversified portfolios. Fees earned on AUM are calculated as a percentage of clients' AUM balances. The asset management fees charged to clients per year depend on various factors, but are commonly driven by the breadth of the client's relationship and generally range from 50 to 150 bps on their total AUM. The net client AUM flows represent the net change in clients' AUM balances over a specified period of time, excluding market appreciation/depreciation and other adjustments.

Client balances increased \$197.9 billion, or eight percent, to \$2.6 trillion at June 30, 2017 compared to June 30, 2016. The increase in client balances was primarily due to AUM growth which increased \$158.3 billion, or 19 percent, due to higher market valuations and positive net flows.

#### Net Migration Summary

GWIM results are impacted by the net migration of clients and their corresponding deposit, loan and brokerage balances primarily to or from Consumer Banking, as presented in the table below. Migrations result from the movement of clients between business segments to better align with client needs.

#### Net Migration Summary <sup>(1)</sup>

	Three Months		Six Months	
	Ended June 30		Ended June 30	
(Dollars in millions)	2017	2016	2017	2016
Total deposits, net – from GWIM	\$(187)	\$(666)	\$(284)	\$(1,057)
Total loans, net – to (from) GWIM	(4 )	5	(130 )	15
Total brokerage, net – to (from) GWIM	(70 )	(326 )	24	(566 )

<sup>(1)</sup> Migration occurs primarily between GWIM and Consumer Banking.

## Global Banking

(Dollars in millions)	Three Months Ended June 30			Six Months Ended June 30		
	2017	2016	% Change	2017	2016	% Change
Net interest income (FTE basis)	\$2,711	\$2,425	12 %	\$5,486	\$4,969	10 %
Noninterest income:						
Service charges	810	759	7	1,575	1,504	5
Investment banking fees	930	799	16	1,855	1,435	29
All other income	588	713	(18 )	1,078	1,242	(13 )
Total noninterest income	2,328	2,271	3	4,508	4,181	8
Total revenue, net of interest expense (FTE basis)	5,039	4,696	7	9,994	9,150	9
Provision for credit losses	15	199	(92 )	32	752	(96 )
Noninterest expense	2,154	2,125	1	4,317	4,299	<1
Income before income taxes (FTE basis)	2,870	2,372	21	5,645	4,099	38
Income tax expense (FTE basis)	1,084	874	24	2,130	1,509	41
Net income	\$1,786	\$1,498	19	\$3,515	\$2,590	36
Net interest yield (FTE basis)	2.99	% 2.81	%	3.03	% 2.90	%
Return on average allocated capital	18	16		18	14	
Efficiency ratio (FTE basis)	42.72	45.24		43.19	46.98	

## Balance Sheet

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Average	Three Months Ended June 30			Six Months Ended June 30		
	2017	2016	% Change	2017	2016	% Change
Total loans and leases	\$345,063	\$334,396	3 %	\$343,966	\$331,519	4 %
Total earning assets	363,844	347,347	5	364,804	344,367	6
Total assets	413,950	396,008	5	414,924	393,891	5
Total deposits	300,483	299,037	<1	302,827	298,086	2
Allocated capital	40,000	37,000	8	40,000	37,000	8

Period end	June 30 2017	December 31 2016	% Change
Total loans and leases	\$344,457	\$339,271	2 %
Total earning assets	360,108	356,241	1
Total assets	410,580	408,330	1
Total deposits	303,205	307,630	(1 )

Global Banking, which includes Global Corporate Banking, Global Commercial Banking, Business Banking and Global Investment Banking, provides a wide range of lending-related products and services, integrated working capital management and treasury solutions, and underwriting and advisory services through our network of offices and client relationship teams. Our lending products and services include commercial loans, leases, commitment facilities, trade finance, real estate lending and asset-based lending. Our treasury solutions business includes treasury management, foreign exchange and short-term investing options. We also provide investment banking products to our clients such as debt and equity underwriting and distribution, and merger-related and other advisory services. Underwriting debt and equity issuances, fixed-income and equity research, and certain market-based activities are executed through our global broker-dealer affiliates which are our primary dealers in several countries. Within Global Banking, Global Commercial Banking clients generally include middle-market companies, commercial real estate firms and not-for-profit companies. Global Corporate Banking clients generally include large global corporations, financial institutions and leasing clients. Business Banking clients include mid-sized U.S.-based businesses requiring customized and integrated financial advice and solutions.

Three Months Ended June 30, 2017 Compared to Three Months Ended June 30, 2016

Net income for Global Banking increased \$288 million to \$1.8 billion driven by higher revenue and lower provision for credit losses.

Revenue increased \$343 million to \$5.0 billion driven by higher net interest income and noninterest income. Net interest income increased \$286 million to \$2.7 billion primarily driven by a stable deposit base and the impact of higher short-term rates, as well as loans and leasing-related growth, partially offset by modest margin compression. Noninterest income increased \$57 million to \$2.3 billion largely due to higher investment banking fees, partially offset by results from loans and related hedging activity in the fair value option portfolio.

The provision for credit losses decreased \$184 million to \$15 million driven by improvement across most of the portfolio, particularly energy. Noninterest expense increased \$29 million to \$2.2 billion driven by additional investments in technology and higher FDIC expense, partially offset by lower operating costs.

The return on average allocated capital was 18 percent, up from 16 percent, as higher net income was partially offset by an increased capital allocation. For more information on capital allocated to the business segments, see Business Segment Operations on page 14.



Six Months Ended June 30, 2017 compared to Six Months Ended June 30, 2016

Net income for Global Banking increased \$925 million to \$3.5 billion driven by higher revenue and lower provision for credit losses.

Revenue increased \$844 million to \$10.0 billion driven by higher net interest income and noninterest income. Net interest income increased \$517 million to \$5.5 billion driven by loans and leasing-related growth, an increased deposit base driven by higher short-term rates and the impact of the allocation of ALM activities, partially offset by margin compression. Noninterest income increased \$327 million to \$4.5 billion largely due to higher investment banking fees and treasury fees, partially offset by lower revenues related to leasing activity.

The provision for credit losses decreased \$720 million to \$32 million primarily driven by the same factors as described in the three-month discussion. Noninterest expense increased \$18 million to \$4.3 billion primarily driven by higher revenue-related incentives and FDIC expense, partially offset by lower personnel and operating expense.

The return on average allocated capital was 18 percent, up from 14 percent, as higher net income was partially offset by an increased capital allocation. For more information on capital allocated to the business segments, see Business Segment Operations on page 14.

Global Corporate, Global Commercial and Business Banking

Global Corporate, Global Commercial and Business Banking each include Business Lending and Global Transaction Services activities. Business Lending includes various lending-related products and services, and related hedging activities, including commercial loans, leases, commitment facilities, trade finance, real estate lending and asset-based lending. Global Transaction Services includes deposits, treasury management, credit card, foreign exchange and short-term investment products.

The table below and following discussion presents a summary of the results, which exclude certain investment banking activities in Global Banking.

Global Corporate, Global

Commercial and Business Banking

	Three Months Ended June 30							
	Global Corporate Banking		Global Commercial Banking		Business Banking Total			
	2017	2016	2017	2016	2017	2016	2017	2016
(Dollars in millions)								
Revenue								
Business Lending	\$1,093	\$1,102	\$1,052	\$1,051	\$99	\$92	\$2,244	\$2,245
Global Transaction Services	833	717	752	663	211	180	1,796	1,560
Total revenue, net of interest expense	\$1,926	\$1,819	\$1,804	\$1,714	\$310	\$272	\$4,040	\$3,805

Balance Sheet

Average

	Six Months Ended June 30							
	Global Corporate Banking		Global Commercial Banking		Business Banking Total			
Total loans and leases	\$156,614	\$154,141	\$170,589	\$162,683	\$17,844	\$17,523	\$345,047	\$334,347
Total deposits	143,844	140,076	120,921	124,529	35,720	34,433	300,485	299,038

Six Months Ended June 30

Global Corporate Banking Global Commercial Banking Business Banking Total

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	2017	2016	2017	2016	2017	2016	2017	2016
Revenue								
Business Lending	\$2,195	\$2,155	\$2,096	\$2,059	\$200	\$190	\$4,491	\$4,404
Global Transaction Services	1,630	1,433	1,459	1,365	408	367	3,497	3,165
Total revenue, net of interest expense	\$3,825	\$3,588	\$3,555	\$3,424	\$608	\$557	\$7,988	\$7,569

Balance Sheet

Average

Total loans and leases	\$155,989	\$152,531	\$170,161	\$161,580	\$17,815	\$17,370	\$343,965	\$331,481
Total deposits	145,134	138,856	121,907	124,925	35,790	34,307	302,831	298,088

Period end

Total loans and leases	\$155,513	\$153,603	\$171,204	\$163,623	\$17,737	\$17,580	\$344,454	\$334,806
Total deposits	145,707	142,357	121,644	127,996	35,853	34,787	303,204	305,140

Business Lending revenue remained flat for the three months ended June 30, 2017 and increased \$87 million for the six months ended June 30, 2017 compared to the same periods in 2016. The increase in the six months ended period was driven by the impact of growth in loans and leases, partially offset by credit spread compression.

Global Transaction Services revenue increased \$236 million and \$332 million for the three and six months ended June 30, 2017 compared to the same periods in 2016 driven by an

increased deposit base driven by higher short-term rates, as well as higher treasury-related revenue.

Average loans and leases increased three percent and four percent for the three and six months ended June 30, 2017 compared to the same periods in 2016 driven by growth in the commercial and industrial, and leasing portfolios.

Average deposits remained relatively unchanged for the three months ended June 30, 2017 and increased two percent for the six months ended June 30, 2017 compared to the same periods in 2016. The

increase in the six months ended period was due to growth with new and existing clients.

#### Global Investment Banking

Client teams and product specialists underwrite and distribute debt, equity and loan products, and provide advisory services and tailored risk management solutions. The economics of certain

investment banking and underwriting activities are shared primarily between Global Banking and Global Markets under an internal revenue-sharing arrangement. To provide a complete discussion of our consolidated investment banking fees, the following table presents total Corporation investment banking fees and the portion attributable to Global Banking.

#### Investment Banking Fees

(Dollars in millions)	Three Months Ended June 30				Six Months Ended June 30			
	Global Banking		Total Corporation		Global Banking		Total Corporation	
	2017	2016	2017	2016	2017	2016	2017	2016
Products								
Advisory	\$465	\$313	\$483	\$333	\$855	\$618	\$888	\$679
Debt issuance	362	390	901	889	774	655	1,827	1,558
Equity issuance	103	96	231	232	226	162	543	420
Gross investment banking fees	930	799	1,615	1,454	1,855	1,435	3,258	2,657
Self-led deals	(47 )	(14 )	(83 )	(46 )	(71 )	(25 )	(142 )	(96 )
Total investment banking fees	\$883	\$785	\$1,532	\$1,408	\$1,784	\$1,410	\$3,116	\$2,561

Total Corporation investment banking fees of \$1.5 billion and \$3.1 billion, excluding self-led deals, included primarily within Global Banking and Global Markets, increased nine percent and 22 percent for the three and six months ended June 30, 2017 compared to the same periods in 2016.

The increase was driven by higher advisory fees and higher debt and equity issuance fees driven by an increase in overall client activity and market fee pools.



## Global Markets

(Dollars in millions)	Three Months Ended June 30			Six Months Ended June 30		
	2017	2016	% Change	2017	2016	% Change
Net interest income (FTE basis)	\$864	\$1,088	(21 )%	\$1,913	\$2,272	(16 )%
Noninterest income:						
Investment and brokerage services	521	525	(1 )	1,052	1,093	(4 )
Investment banking fees	589	603	(2 )	1,255	1,097	14
Trading account profits	1,743	1,872	(7 )	3,920	3,467	13
All other income	229	221	4	514	330	56
Total noninterest income	3,082	3,221	(4 )	6,741	5,987	13
Total revenue, net of interest expense (FTE basis)	3,946	4,309	(8 )	8,654	8,259	5
Provision for credit losses	25	(5 )	n/m	8	4	100
Noninterest expense	2,649	2,583	3	5,406	5,032	7
Income before income taxes (FTE basis)	1,272	1,731	(27 )	3,240	3,223	1
Income tax expense (FTE basis)	442	618	(28 )	1,113	1,138	(2 )
Net income	\$830	\$1,113	(25 )	\$2,127	\$2,085	2
Return on average allocated capital	10	% 12	%	12	% 11	%
Efficiency ratio (FTE basis)	67.12	59.95		62.46	60.93	

## Balance Sheet

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Average	Three Months Ended June 30			Six Months Ended June 30		
	2017	2016	% Change	2017	2016	% Change
Trading-related assets:						
Trading account securities	\$221,569	\$178,047	24 %	\$212,767	\$182,989	16 %
Reverse repurchases	101,551	92,805	9	99,206	89,108	11
Securities borrowed	88,041	89,779	(2 )	84,695	85,293	(1 )
Derivative assets	41,402	50,654	(18 )	40,877	52,083	(22 )
Total trading-related assets <sup>(1)</sup>	452,563	411,285	10	437,545	409,473	7
Total loans and leases	69,638	69,620	<1	69,850	69,452	1
Total earning assets <sup>(1)</sup>	456,589	422,815	8	443,321	420,506	5
Total assets	645,228	580,701	11	626,225	580,963	8
Total deposits	31,919	34,518	(8 )	32,535	35,202	(8 )
Allocated capital	35,000	37,000	(5 )	35,000	37,000	(5 )

Period end	June 30 2017	December 31 2016	% Change
Total trading-related assets <sup>(1)</sup>	\$436,193	\$380,562	15 %
Total loans and leases	73,973	72,743	2
Total earning assets <sup>(1)</sup>	448,613	397,023	13
Total assets	633,193	566,060	12
Total deposits	33,363	34,927	(4 )

<sup>(1)</sup> Trading-related assets include derivative assets, which are considered non-earning assets.

n/m = not meaningful

Global Markets offers sales and trading services, including research, to institutional clients across fixed-income, credit, currency, commodity and equity businesses. Global Markets product coverage includes securities and derivative products in both the primary and secondary markets. Global Markets provides market-making, financing, securities clearing, settlement and custody services globally to our institutional investor clients in support of their investing and trading activities. We also work with our commercial and corporate clients to provide risk management products using interest rate, equity, credit, currency and commodity derivatives, foreign exchange, fixed-income and mortgage-related products. As a result of our market-making activities in these products, we may be required to manage risk in a broad range of financial products including government securities, equity and equity-linked securities, high-grade and high-yield corporate debt securities, syndicated loans, mortgage-backed securities (MBS), commodities and asset-backed securities (ABS). The economics of certain investment banking and underwriting activities are shared primarily between Global Markets and Global Banking under an internal revenue-sharing

arrangement. Global Banking originates certain deal-related transactions with our corporate and

commercial clients that are executed and distributed by Global Markets. For more information on investment banking fees on a consolidated basis, see page 23.

Three Months Ended June 30, 2017 Compared to Three Months Ended June 30, 2016

Net income for Global Markets decreased \$283 million to \$830 million driven by lower sales and trading revenue, investment banking fees and increased noninterest expense. Net DVA losses were \$159 million compared to losses of \$164 million. Sales and trading revenue, excluding net DVA, decreased \$332 million primarily due to weaker performance in fixed-income, currencies and commodities (FICC) macro products and emerging markets. Noninterest expense increased \$66 million to \$2.6 billion as additional investments in technology were partially offset by lower operating costs.

Average earning assets increased \$33.8 billion to \$456.6 billion primarily driven by targeted growth in client financing activities in the global equities business.

The return on average allocated capital was 10 percent, down from 12 percent as lower net income was partially offset by a decreased capital allocation.

Six Months Ended June 30, 2017 compared to Six Months Ended June 30, 2016

Net income for Global Markets increased \$42 million to \$2.1 billion. Net DVA losses were \$289 million compared to losses of \$10 million. Excluding net DVA, net income increased \$215 million to \$2.3 billion primarily driven by higher sales and trading revenue and investment banking fees, partially offset by higher noninterest expense. Sales and trading revenue, excluding net DVA, increased \$409 million primarily due to a stronger performance across credit and mortgage products. Noninterest expense increased \$374 million to \$5.4 billion primarily due to litigation expense in the six months ended June 30, 2017 compared to a litigation recovery in the same period in 2016 and higher revenue-related expenses.

Average earning assets increased \$22.8 billion to \$443.3 billion and period-end trading-related assets increased \$55.6 billion to \$436.2 billion both primarily driven by targeted growth in client financing activities in the global equities business.

The return on average allocated capital was 12 percent, up from 11 percent, reflecting higher net income and a decreased capital allocation.

### Sales and Trading Revenue

Sales and trading revenue includes unrealized and realized gains and losses on trading and other assets, net interest income, and fees primarily from commissions on equity securities. Sales and trading revenue is segregated into fixed-income (government debt obligations, investment and non-investment grade corporate debt obligations, commercial MBS, residential mortgage-backed securities (RMBS), collateralized loan obligations (CLOs), interest rate and credit derivative contracts), currencies (interest rate and foreign exchange contracts), commodities (primarily futures, forwards, swaps and options) and equities (equity-linked derivatives and cash equity activity). The following table and related discussion present sales and trading revenue, substantially all of which is in Global Markets, with the remainder in Global Banking. In addition, the following table and related discussion present sales and trading revenue excluding the impact of net DVA, which is a non-GAAP financial measure. We believe the use of this non-GAAP financial measure provides additional useful information to assess the underlying performance of these businesses and to allow better comparison of period-to-period operating performance.

### Sales and Trading Revenue <sup>(1, 2)</sup>

(Dollars in millions)	Three Months		Six Months	
	Ended June 30 2017	2016	Ended June 30 2017	2016
Sales and trading revenue				
Fixed-income, currencies and commodities	\$2,106	\$2,456	\$4,916	\$4,861
Equities	1,104	1,081	2,193	2,118
Total sales and trading revenue	\$3,210	\$3,537	\$7,109	\$6,979

### Sales and trading revenue, excluding net DVA <sup>(3)</sup>

Fixed-income, currencies and commodities	\$2,254	\$2,615	\$5,184	\$4,880
Equities	1,115	1,086	2,214	2,109
Total sales and trading revenue, excluding net DVA	\$3,369	\$3,701	\$7,398	\$6,989

Includes FTE adjustments of \$52 million and \$99 million for the three and six months ended June 30, 2017

<sup>(1)</sup> compared to \$44 million and \$87 million for the same periods in 2016. For more information on sales and trading revenue, see Note 2 – Derivatives to the Consolidated Financial Statements.

<sup>(2)</sup> Includes Global Banking sales and trading revenue of \$56 million and \$114 million for the three and six months ended June 30, 2017 compared to \$120 million and \$280 million for the same periods in 2016.

<sup>(3)</sup> FICC and Equities sales and trading revenue, excluding net DVA, is a non-GAAP financial measure. FICC net DVA losses were \$148 million and \$268 million for the three and six months ended June 30, 2017 compared to net DVA losses of \$159 million and \$19 million for the same periods in 2016. Equities net DVA losses were \$11 million and \$21 million for the three and six months ended June 30, 2017 compared to net DVA losses of \$5

million and gains of \$9 million for the same periods in 2016.

The explanations for period-over-period changes in sales and trading, FICC and Equities revenue, as set forth below, would be the same if net DVA was included.

Three Months Ended June 30, 2017 Compared to Three Months Ended June 30, 2016

FICC revenue, excluding net DVA, decreased \$361 million due to weaker performance in rates and emerging markets relative to an especially strong quarter in the prior year. Equities revenue,

excluding net DVA, increased \$29 million primarily due to growth in client financing activities offset by slower secondary markets.

Six Months Ended June 30, 2017 compared to Six Months Ended June 30, 2016

FICC revenue, excluding net DVA, increased \$304 million due to strength in credit and mortgage products. Equities revenue, excluding net DVA, increased \$105 million primarily due to growth in client financing activities.

## All Other

(Dollars in millions)	Three Months Ended June 30			Six Months Ended June 30		
	2017	2016	% Change	2017	2016	% Change
Net interest income (FTE basis)	\$91	\$218	(58 )%	\$181	\$349	(48 )%
Noninterest income:						
Card income	28	54	(48 )	70	99	(29 )
Mortgage banking income	89	44	102	91	286	(68 )
Gains on sales of debt securities	101	249	(59 )	153	439	(65 )
All other income (loss)	569	(281 )	n/m	289	(614 )	(147 )
Total noninterest income	787	66	n/m	603	210	n/m
Total revenue, net of interest expense (FTE basis)	878	284	n/m	784	559	40
Provision for credit losses	(159 )	42	n/m	(185 )	(79 )	134
Noninterest expense	1,122	1,082	4	3,311	3,464	(4 )
Loss before income taxes (FTE basis)	(85 )	(840 )	(90 )	(2,342 )	(2,826 )	(17 )
Income tax expense (benefit) (FTE basis)	98	(633 )	(115 )	(1,325 )	(1,523 )	(13 )
Net loss	\$(183 )	\$(207 )	(12 )	\$(1,017 )	\$(1,303 )	(22 )

Balance Sheet <sup>(1)</sup>

Average	Three Months Ended June 30			Six Months Ended June 30		
	2017	2016	% Change	2017	2016	% Change
Total loans and leases	\$87,667	\$111,553	(21 )%	\$91,250	\$114,803	(21 )%
Total deposits	26,320	28,461	(8 )	25,811	27,610	(7 )
Period end				June 30 2017	December 31 2016	% Change
Total loans and leases <sup>(2)</sup>				\$78,830	\$96,713	(18 )%

Total deposits	26,603	23,061	15
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In segments where the total of liabilities and equity exceeds assets, which are generally deposit-taking segments, we allocate assets from All Other to those segments to match liabilities (i.e., deposits) and allocated shareholders' equity. Such allocated assets were \$521.8 billion and \$521.9 billion for the three and six months ended June 30, 2017 compared to \$499.5 billion and \$496.5 billion for the same periods in 2016, and \$517.7 billion and \$518.7 billion at June 30, 2017 and December 31, 2016.

Included \$9.2 billion of non-U.S. credit card loans, which were included in assets of business held for sale on the Consolidated Balance Sheet at December 31, 2016. On June 1, 2017, the Corporation completed the sale of its non-U.S. consumer credit card business.

n/m = not meaningful

All Other consists of ALM activities, equity investments, non-core mortgage loans and servicing activities, the net impact of periodic revisions to the MSR valuation model for both core and non-core MSRs and the related economic hedge results and ineffectiveness, other liquidating businesses, residual expense allocations and other. ALM activities encompass certain residential mortgages, debt securities, interest rate and foreign currency risk management activities, the impact of certain allocation methodologies and accounting hedge ineffectiveness. The results of certain ALM activities are allocated to our business segments. For more information on our ALM activities, see Note 17 – Business Segment Information to the Consolidated Financial Statements. Equity investments include our merchant services joint venture as well as Global Principal Investments (GPI) which is comprised of a portfolio of equity, real estate and other alternative investments. For more information on our merchant services joint venture, see Note 10 – Commitments and Contingencies to the Consolidated Financial Statements.

On June 1, 2017, we completed the sale of our non-U.S. consumer credit card business, resulting in a \$103 million after-tax gain associated with the sale. For more information on the sale of our non-U.S. consumer credit card business, see Recent Events on page 3 and Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements.

The Corporation classifies consumer real estate loans as core or non-core based on loan and customer characteristics such as origination date, product type, LTV, FICO score and delinquency status. For more information on the core and non-core portfolios, see Consumer Portfolio Credit Risk Management on page 39. Residential mortgage loans that are held for ALM purposes,

including interest rate or liquidity risk management, are classified as core and are presented on the balance sheet of All Other. For more information on our interest rate and liquidity risk management activities, see Liquidity Risk on page 35 and Interest Rate Risk Management for the Banking Book on page 63. During the six months ended June 30, 2017, residential mortgage loans held for ALM activities decreased \$3.3 billion to \$31.4 billion at June 30, 2017 primarily as a result of payoffs and paydowns outpacing new originations. Non-core residential mortgage and home equity loans, which are principally run-off portfolios, including certain loans accounted for under the fair value option and MSRs pertaining to non-core loans serviced for others, are also held in All Other. During the six months ended June 30, 2017, total non-core loans decreased \$5.9 billion to \$47.2 billion at June 30, 2017 due primarily to payoffs and paydowns, as well as loan sales.

Three Months Ended June 30, 2017 Compared to Three Months Ended June 30, 2016

The net loss for All Other decreased \$24 million to \$183 million due to a \$793 million pre-tax gain recognized in connection with the sale of the non-U.S. consumer credit card business, a benefit in the provision for credit losses and higher mortgage banking income, offset by higher income tax expense, lower gains on sales of debt securities, lower net interest income and higher noninterest expense.

The provision for credit losses improved \$201 million to a benefit of \$159 million driven by reserve releases associated with the continued improvement in non-core consumer real estate loans as well as continued run-off of the portfolio. Noninterest expense increased \$40 million to \$1.1 billion driven by a \$295 million

impairment charge related to certain data centers in the process of being sold and an increase in severance costs, offset by lower operating and non-core mortgage costs.

Income tax expense was \$98 million compared to a benefit of \$633 million driven by tax expense of \$690 million recognized in connection with the sale of the non-U.S. consumer credit card business, which related to gains on derivatives used to hedge the currency risk of the net investment. Both periods included income tax benefit adjustments to eliminate the FTE treatment of certain tax credits recorded in Global Banking.

Six Months Ended June 30, 2017 compared to Six Months Ended June 30, 2016

The net loss for All Other decreased \$286 million to \$1.0 billion due to a \$793 million pre-tax gain related to the sale of the non-U.S. consumer credit card business, a decrease in noninterest expense and a benefit in the provision for credit losses, offset by lower gains on sales of debt securities, a decrease in the income tax benefit, lower net interest income and lower mortgage banking income.

Mortgage banking income in All Other decreased \$195 million primarily driven by lower MSR results, net of the related hedge performance, and lower servicing fees driven by a smaller servicing portfolio. Gains on sales of loans, including nonperforming and other delinquent loans, and re-performing loans were \$44 million compared to gains of \$178 million in the same period in 2016.

The benefit in the provision for credit losses increased \$106 million to a benefit of \$185 million driven by the same factors as described in the three-month discussion. Noninterest expense decreased \$153 million to \$3.3 billion driven by lower litigation expense and a decline in non-core mortgage servicing costs, partially offset by the factors as described in the three-month discussion.

The income tax benefit was \$1.3 billion compared to a benefit of \$1.5 billion. The decrease was driven by a \$690 million tax expense as described in the three-month discussion, partially offset by a tax benefit related to a new accounting standard on share-based compensation. Both periods included income tax benefit adjustments to eliminate the FTE treatment of certain tax credits recorded in Global Banking.

Off-Balance Sheet Arrangements and Contractual Obligations

We have contractual obligations to make future payments on debt and lease agreements. Additionally, in the normal course of business, we enter into contractual arrangements whereby we commit to future purchases of products or services from unaffiliated parties. For more information on obligations and commitments, see Note 10 – Commitments and Contingencies to the Consolidated Financial Statements, Off-Balance Sheet Arrangements and Contractual Obligations in the MD&A of the Corporation's 2016 Annual Report on Form 10-K, as well as Note 11 – Long-term Debt and Note 12 – Commitments and Contingencies to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.

Representations and Warranties

For more information on representations and warranties, the liability for representations and warranties exposures and the corresponding estimated range of possible loss, see Note 7 – Representations and Warranties Obligations and Corporate Guarantees to the Consolidated Financial Statements of the

Corporation's 2016 Annual Report on Form 10-K and, for more information related to the sensitivity of the assumptions used to estimate our liability for representations and warranties, see Complex Accounting Estimates – Representations and Warranties Liability in the MD&A of the Corporation's 2016 Annual Report on Form 10-K. At June 30, 2017 and December 31, 2016, we had \$17.6 billion and \$18.3 billion of unresolved repurchase claims, predominately related to subprime and pay option first-lien loans and home equity loans. Outstanding repurchase claims remain unresolved primarily due to (1) the level of detail, support and analysis accompanying such claims, which impact overall claim quality and, therefore, claim resolution and (2) the lack of an established process to resolve disputes related to these claims.

In addition to unresolved repurchase claims, we have received notifications from sponsors of third-party securitizations with whom we engaged in whole-loan transactions indicating that we may have indemnity obligations with respect to loans for which we have not received a repurchase request. These outstanding notifications totaled \$1.3 billion at both June 30, 2017 and December 31, 2016. There were no new notifications received during the six months ended June 30, 2017.



The liability for representations and warranties and corporate guarantees is included in accrued expenses and other liabilities on the Consolidated Balance Sheet and the related provision is included in mortgage banking income. At June 30, 2017 and December 31, 2016, the liability for representations and warranties was \$2.2 billion and \$2.3 billion. For the three and six months ended June 30, 2017, the representations and warranties provision was a benefit of \$2 million and \$5 million compared to a provision of \$17 million and \$59 million for the same periods in 2016. In addition, we currently estimate that the range of possible loss for representations and warranties exposures could be up to \$2 billion over existing accruals at June 30, 2017. The estimated range of possible loss represents a reasonably possible loss, but does not represent a probable loss, and is based on currently available information, significant judgment and a number of assumptions that are subject to change.

Future provisions and/or ranges of possible loss associated with obligations under representations and warranties may be significantly impacted if future experiences are different from historical experience or our understandings, interpretations or assumptions. Adverse developments, with respect to one or more of the assumptions underlying the liability for representations and warranties and the corresponding estimated range of possible loss, such as counterparties successfully challenging or avoiding the application of the relevant statute of limitations, could result in significant increases to future provisions and/or the estimated range of possible loss.

#### Other Mortgage-related Matters

We continue to be subject to additional mortgage-related litigation and disputes, as well as governmental and regulatory scrutiny and investigations, related to our past and current origination, servicing, transfer of servicing and servicing rights, servicing compliance obligations, foreclosure activities, indemnification obligations, and mortgage insurance and captive reinsurance practices with mortgage insurers. The ongoing environment of additional regulation, increased regulatory compliance obligations, and enhanced regulatory enforcement, combined with ongoing uncertainty related to the continuing evolution of the regulatory

environment, has resulted in increased operational and compliance costs and may limit our ability to continue providing certain products and services. For more information on management's estimate of the aggregate range of possible loss for certain litigation matters and on regulatory investigations, see Note 10 – Commitments and Contingencies to the Consolidated Financial Statements.

#### Managing Risk

Risk is inherent in all our business activities. The seven key types of risk faced by the Corporation are strategic, credit, market, liquidity, compliance, operational and reputational risks. Sound risk management enables us to serve our customers and deliver for our shareholders. If not managed well, risks can result in financial loss, regulatory sanctions and penalties, and damage to our reputation, each of which may adversely impact our ability to execute our business strategies. The Corporation takes a comprehensive approach to risk management with a defined Risk Framework and an articulated Risk Appetite Statement which are approved annually by the Enterprise Risk Committee (ERC) and the Board.

Our Risk Framework is the foundation for comprehensive management of the risks facing the Corporation. The Risk Framework sets forth clear roles, responsibilities and accountability for the management of risk and provides a blueprint for how the Board, through delegation of authority to committees and executive officers, establishes risk appetite and associated limits for our activities.

Our Risk Appetite Statement is intended to ensure that the Corporation maintains an acceptable risk profile by providing a common framework and a comparable set of measures for senior management and the Board to clearly indicate the level of risk the Corporation is willing to accept. Risk appetite is set at least annually and is aligned with the Corporation's strategic, capital and financial operating plans. Our line of business strategies and risk appetite are also similarly aligned.

For more information on our risk management activities, including our Risk Framework, and the key types of risk faced by the Corporation, see Managing Risk through Reputational Risk sections in the MD&A of the Corporation's 2016 Annual Report on Form 10-K.

#### Capital Management

The Corporation manages its capital position so its capital is more than adequate to support its business activities and to maintain

capital, risk and risk appetite commensurate with one another. Additionally, we seek to maintain safety and soundness at all times, even under adverse scenarios, take advantage of organic growth opportunities, meet obligations to creditors and counterparties, maintain ready access to financial markets, continue to serve as a credit intermediary, remain a source of strength for our subsidiaries, and satisfy current and future regulatory capital requirements. Capital management is integrated into our risk and governance processes, as capital is a key consideration in the development of our strategic plan, risk appetite and risk limits.

We periodically review capital allocated to our businesses and allocate capital annually during the strategic and capital planning processes. For additional information, see Business Segment Operations on page 14.

#### CCAR and Capital Planning

The Federal Reserve requires BHCs to submit a capital plan and requests for capital actions on an annual basis, consistent with the rules governing the CCAR capital plan.

On June 28, 2017, following the Federal Reserve's non-objection to our 2017 CCAR capital plan, the Board authorized the repurchase of \$12.9 billion in common stock from July 1, 2017 through June 30, 2018, including approximately \$900 million to offset the effect of equity-based compensation plans during the same period. The common stock repurchase authorization includes both common stock and warrants.

The timing and amount of common stock repurchases will be subject to various factors, including the Corporation's capital position, liquidity, financial performance and alternative uses of capital, stock trading price, and general market conditions, and may be suspended at any time. The common stock repurchases may be effected through open market purchases or privately negotiated transactions, including repurchase plans that satisfy the conditions of Rule 10b5-1 of the Securities Exchange Act of 1934. As a "well-capitalized" BHC, we may notify the Federal Reserve of our intention to make additional capital distributions not to exceed 0.25 percent of Tier 1 capital, and which were not contemplated in our capital plan, subject to the Federal Reserve's non-objection.

During the 12 months ended June 30, 2017, we had repurchased \$7.7 billion of common stock, pursuant to the Board's repurchase authorizations announced on June 29, 2016 and January 13, 2017. These repurchase authorizations expired on June 30, 2017.

## Regulatory Capital

As a financial services holding company, we are subject to regulatory capital rules issued by U.S. banking regulators including Basel 3, which includes certain transition provisions through January 1, 2019. The Corporation and its primary affiliated banking entity, BANA, are Basel 3 Advanced approaches institutions.

### Basel 3 Overview

Basel 3 updated the composition of capital and established a Common equity tier 1 capital ratio. Common equity tier 1 capital primarily includes common stock, retained earnings and accumulated other comprehensive income (OCI), net of deductions and adjustments primarily related to goodwill, deferred tax assets, intangibles, MSRs and defined benefit pension assets. Under the Basel 3 regulatory capital transition provisions, certain deductions and adjustments to Common equity tier 1 capital are phased in through January 1, 2018. As of January 1, 2017, under the transition provisions, 80 percent of these deductions and adjustments was recognized. Basel 3 also revised minimum capital ratios and buffer requirements, added a supplementary leverage ratio (SLR), and addressed the adequately capitalized minimum requirements under the Prompt Corrective Action (PCA) framework. Finally, Basel 3 established two methods of calculating risk-weighted assets, the Standardized approach and the Advanced approaches. The Standardized approach relies primarily on supervisory risk weights based on exposure type, and the Advanced approaches determine risk weights based on internal models.

As an Advanced approaches institution, we are required to report regulatory risk-based capital ratios and risk-weighted assets under both the Standardized and Advanced approaches. The approach that yields the lower ratio is used to assess capital adequacy including under the PCA framework.

### Minimum Capital Requirements

Minimum capital requirements and related buffers are being phased in from January 1, 2014 through January 1, 2019. The PCA framework establishes categories of capitalization including "well capitalized," based on the Basel 3 regulatory ratio requirements. U.S. banking regulators are required to take certain mandatory actions depending on the category of capitalization, with no mandatory actions required for "well-capitalized" banking organizations, which included BANA at June 30, 2017.

We are subject to a capital conservation buffer, a countercyclical capital buffer and a global systemically important

bank (G-SIB) surcharge that are being phased in over a three-year period ending January 1, 2019. Once fully phased in, the Corporation's risk-based capital ratio requirements will include a capital conservation buffer greater than 2.5 percent, plus any applicable countercyclical capital buffer and a G-SIB surcharge in order to avoid restrictions on capital distributions and discretionary bonus payments. The buffers and surcharge must be comprised solely of Common equity tier 1 capital. Under the phase-in provisions, we were required to maintain a capital conservation buffer greater than 1.25 percent plus a G-SIB surcharge of 1.5 percent at June 30, 2017. The countercyclical capital buffer is currently set at zero. We estimate that our fully phased-in G-SIB surcharge will be 2.5 percent. The G-SIB surcharge may differ from this estimate over time. For more information on the Corporation's transition and fully phased-in capital ratios and regulatory requirements, see Table 11.

### Supplementary Leverage Ratio

Basel 3 requires Advanced approaches institutions to disclose an SLR. The numerator of the SLR is quarter-end Basel 3 Tier 1 capital. The denominator is total leverage exposure based on the daily average of the sum of on-balance sheet exposures less permitted Tier 1 deductions, as well as the simple average of certain off-balance sheet exposures, as of the end of each month in a quarter. Effective January 1, 2018, the Corporation will be required to maintain a minimum SLR of 3.0 percent, plus a leverage buffer of 2.0 percent in order to avoid certain restrictions on capital distributions and discretionary bonus payments. Insured depository institution subsidiaries of BHCs will be required to maintain a minimum 6.0 percent SLR to be considered "well capitalized" under the PCA framework.

### Capital Composition and Ratios

Table 11 presents Bank of America Corporation's transition and fully phased-in capital ratios and related information in accordance with Basel 3 Standardized and Advanced approaches as measured at June 30, 2017 and December 31, 2016. Fully phased-in estimates are non-GAAP financial measures that the Corporation considers to be useful measures in evaluating compliance with new regulatory capital requirements that are not yet effective. For reconciliations to GAAP financial measures, see Table 14. As of June 30, 2017 and December 31, 2016, the

Corporation met the definition of “well capitalized” under current regulatory requirements.

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Table 11 Bank of America Corporation Regulatory Capital under Basel 3 <sup>(1)</sup>

(Dollars in millions)	June 30, 2017 Transition			Fully Phased-in		
	Standardized Approach	Advanced Approaches	Regulatory Minimum <sup>(2)</sup>	Standardized Approach	Advanced Approaches <sup>(3)</sup>	Regulatory Minimum <sup>(4)</sup>
Risk-based capital metrics:						
Common equity tier 1 capital	\$171,431	\$171,431		\$168,704	\$168,704	
Tier 1 capital	194,822	194,822		193,576	193,576	
Total capital <sup>(5)</sup>	231,696	222,671		228,536	219,511	
Risk-weighted assets (in billions)						
Common equity tier 1 capital ratio	12.3	% 11.6	% 7.25	% 12.0	% 11.5	% 9.5
Tier 1 capital ratio	14.0	13.2	8.75	13.8	13.2	11.0
Total capital ratio	16.7	15.1	10.75	16.3	15.0	13.0
Leverage-based metrics:						
Adjusted quarterly average assets (in billions) <sup>(6)</sup>	\$2,192	\$2,192		\$2,192	\$2,192	
Tier 1 leverage ratio	8.9	% 8.9	% 4.0	8.8	% 8.8	% 4.0
SLR leverage exposure					\$2,755	

(in  
billions)  
SLR

7.0 % 5.0

December 31, 2016

Risk-based  
capital  
metrics:

Common

equity tier 1 capital	\$ 168,866	\$ 168,866		\$ 162,729	\$ 162,729
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Tier 1

capital	190,315	190,315		187,559	187,559
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Total

capital <sup>(5)</sup>	228,187	218,981		223,130	213,924
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Risk-weighted

assets (in billions)	1,399	1,530		1,417	1,512
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Common

equity tier 1 capital ratio	12.1	% 11.0	% 5.875	% 11.5	% 10.8	% 9.5	%
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Tier 1

capital ratio	13.6	12.4	7.375	13.2	12.4	11.0
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Total

capital ratio	16.3	14.3	9.375	15.8	14.2	13.0
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Leverage-based  
metrics:

Adjusted  
quarterly

average assets (in billions)	\$2,131	\$2,131		\$2,131	\$2,131
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<sup>(6)</sup>

Tier 1

leverage ratio	8.9	% 8.9	% 4.0	8.8	% 8.8	% 4.0
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SLR

leverage  
exposure

\$2,702

(in  
billions)

SLR	6.9	% 5.0
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<sup>(1)</sup> As an Advanced approaches institution, we are required to report regulatory capital risk-weighted assets and ratios under both the Standardized and Advanced approaches. The approach that yields the lower ratio is to be used to

assess capital adequacy and was the Advanced approaches method at June 30, 2017 and December 31, 2016.

(2) The June 30, 2017 and December 31, 2016 amounts include a transition capital conservation buffer of 1.25 percent and 0.625 percent, and a transition G-SIB surcharge of 1.5 percent and 0.75 percent. The countercyclical capital buffer for both periods is zero.

(3) Basel 3 fully phased-in Advanced approaches estimates assume approval by U.S. banking regulators of our internal models methodology (IMM) for calculating counterparty credit risk regulatory capital for derivatives. As of June 30, 2017, we did not have regulatory approval of the IMM model. Basel 3 fully phased-in Common equity tier 1 capital ratio would be reduced by approximately 25 bps if IMM is not used.

(4) Fully phased-in regulatory minimums assume a capital conservation buffer of 2.5 percent and estimated G-SIB surcharge of 2.5 percent. The estimated fully phased-in countercyclical capital buffer is currently set at zero. We will be subject to fully phased-in regulatory minimums on January 1, 2019. The fully phased-in SLR minimum assumes a leverage buffer of 2.0 percent and is applicable on January 1, 2018.

(5) Total capital under the Advanced approaches differs from the Standardized approach due to differences in the amount permitted in Tier 2 capital related to the qualifying allowance for credit losses.

(6) Reflects adjusted average total assets for the three months ended June 30, 2017 and December 31, 2016.

Common equity tier 1 capital under Basel 3 Advanced – Transition was \$171.4 billion at June 30, 2017, an increase of \$2.6 billion compared to December 31, 2016 driven by earnings, partially offset by common stock repurchases, dividends and the phase-in under Basel 3 transition provisions of deductions, primarily related to deferred tax assets.

During the six months ended June 30, 2017, Total capital increased \$3.7 billion primarily

driven by the same factors as the increase in Common equity tier 1 capital.

Risk-weighted assets decreased \$52 billion during the six months ended June 30, 2017 to \$1,478 billion primarily due to model improvements, the sale of the non-U.S. consumer credit card business, improved credit quality and lower market risk.



Table 12 presents the capital composition as measured under Basel 3 – Transition at June 30, 2017 and December 31, 2016.

Table 12 Capital Composition under Basel 3 – Transition<sup>(1, 2)</sup>

(Dollars in millions)	June 30 2017	December 31 2016
Total common shareholders' equity	\$245,767	\$ 241,620
Goodwill	(68,416 )	(69,191 )
Deferred tax assets arising from net operating loss and tax credit carryforwards	(5,826 )	(4,976 )
Adjustments for amounts recorded in accumulated OCI attributed to defined benefit postretirement plans	685	1,392
Net unrealized (gains) losses on debt and equity securities and net (gains) losses on derivatives recorded in accumulated OCI, net-of-tax	923	1,402
Intangibles, other than mortgage servicing rights and goodwill	(1,354 )	(1,198 )
Defined benefit pension fund assets	(723 )	(512 )
DVA related to liabilities and derivatives	623	413
Other	(248 )	(84 )
Common equity tier 1 capital	171,431	168,866
Qualifying preferred stock, net of issuance cost	25,220	25,220
Deferred tax assets arising from net operating loss and tax credit carryforwards	(1,457 )	(3,318 )
Defined benefit pension fund assets	(181 )	(341 )
DVA related to liabilities and derivatives under transition	156	276
Other	(347 )	(388 )
Total Tier 1 capital	194,822	190,315
Long-term debt qualifying as Tier 2 capital	23,370	23,365
Eligible credit reserves included in Tier 2 capital	2,607	3,035
Nonqualifying capital instruments subject to phase out from Tier 2 capital	1,893	2,271
Other	(21 )	(5 )
Total Basel 3 Capital	\$222,671	\$ 218,981

<sup>(1)</sup> See Table 11, footnote 1.

<sup>(2)</sup> Deductions from and adjustments to regulatory capital subject to transition provisions under Basel 3 are generally recognized in 20 percent annual increments, and will be fully recognized as of January 1, 2018. Any assets that are a direct deduction from the computation of capital are excluded from risk-weighted assets and adjusted average total assets.

Table 13 presents the components of our risk-weighted assets as measured under Basel 3 – Transition at June 30, 2017 and December 31, 2016.

Table 13 Risk-weighted assets under Basel 3 – Transition

(Dollars in billions)	June 30, 2017		December 31, 2016	
	Standard Approach	Advanced Approaches	Standard Approach	Advanced Approaches
Credit risk	\$1,331	\$ 864	\$1,334	\$ 903
Market risk	59	57	65	63

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Operational risk	n/a	500	n/a	500
Risks related to CVA	n/a	57	n/a	64
Total risk-weighted assets	\$1,390	\$ 1,478	\$1,399	\$ 1,530

n/a = not applicable

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Table 14 presents a reconciliation of regulatory capital in accordance with Basel 3 Standardized – Transition to the Basel 3 Standardized approach fully phased-in estimates and Basel 3 Advanced approaches fully phased-in estimates at June 30, 2017 and December 31, 2016.

Table 14 Regulatory Capital  
Reconciliations between  
Basel 3 Transition to Fully  
Phased-in <sup>(1)</sup>

(Dollars in millions)	June 30 2017	December 31 2016
Common equity tier 1 capital (transition)	\$ 171,431	\$ 168,866
Deferred tax assets arising from net operating loss and tax credit carryforwards phased in during transition	(1,457 )	(3,318 )
Accumulated OCI phased in during transition	(845 )	(1,899 )
Intangibles phased in during transition	(338 )	(798 )
Defined benefit pension fund assets phased in during transition	(181 )	(341 )
DVA related to liabilities and derivatives	156	276

phased in during transition		
Other adjustments and deductions	62	(57)
phased in during transition		
Common equity tier 1 capital	168,704	162,729
(fully phased-in) Additional Tier 1 capital	23,391	21,449
(transition) Deferred tax assets arising from net operating loss and tax credit carryforwards	1,457	3,318
phased out during transition		
Defined benefit pension fund assets	181	341
phased out during transition		
DVA related to liabilities and derivatives	156	(276)
phased out during transition	(1)	(2)

Other transition adjustments to additional Tier 1 capital		
Additional Tier 1 capital (fully phased-in)	24,872	24,830
Tier 1 capital (fully phased-in)	193,576	187,559
Tier 2 capital (transition)	27,849	28,666
Nonqualifying capital instruments phased out during transition	(1,893)	(2,271)
Other adjustments to Tier 2 capital	9,004	9,176
Tier 2 capital (fully phased-in)	34,960	35,571
Basel 3 Standardized approach		
Total capital (fully phased-in)	228,536	223,130
Change in Tier 2 qualifying allowance for credit losses	(9,025)	(9,206)
Basel 3 Advanced approaches	\$219,511	\$213,924
Total		

capital  
(fully  
phased-in)

Risk-weighted  
assets – As  
reported  
to Basel 3  
(fully  
phased-in)  
Basel 3  
Standardized  
approach  
risk-weighted \$ 1,389,696 \$ 1,399,477

assets as  
reported  
Changes  
in  
risk-weighted  
assets  
from 15,413 17,638

reported  
to fully  
phased-in  
Basel 3  
Standardized  
approach  
risk-weighted \$ 1,405,109 \$ 1,417,115

assets  
(fully  
phased-in)

Basel 3  
Advanced  
approaches  
risk-weighted \$ 1,477,633 \$ 1,529,903

assets as  
reported  
Changes  
in  
risk-weighted  
assets  
from (13,545 ) (18,113 )

reported  
to fully  
phased-in  
Basel 3 \$ 1,464,088 \$ 1,511,790

Advanced  
approaches  
risk-weighted  
assets

(fully  
phased-in)  
(2)

(1) See Table 11, footnote 1.

Basel 3 fully phased-in Advanced approaches estimates assume approval by U.S. banking regulators of our IMM

(2) for calculating counterparty credit risk regulatory capital for derivatives. As of June 30, 2017, we did not have regulatory approval of the IMM model. Basel 3 fully phased-in Common equity tier 1 capital ratio would be reduced by approximately 25 bps if IMM is not used.

Bank of America, N.A. Regulatory Capital

Table 15 presents transition regulatory capital information for BANA in accordance with Basel 3 Standardized and Advanced approaches as measured at June 30, 2017 and December 31, 2016. As of June 30, 2017, BANA met the definition of “well capitalized” under the PCA framework.

Table 15 Bank of America, N.A. Regulatory Capital under  
Basel 3

	June 30, 2017				Advanced Approaches			
	Standardized Approach		Minimum Required <sup>(1)</sup>		Ratio		Minimum Required <sup>(1)</sup>	
(Dollars in millions)	Ratio	Amount	Ratio	Amount	Ratio	Amount	Ratio	Amount
Common equity tier 1 capital	12.8%	\$149,759	6.5 %		14.7%	\$149,759	6.5 %	
Tier 1 capital	12.8	149,759	8.0		14.7	149,759	8.0	
Total capital	14.0	162,892	10.0		15.2	154,233	10.0	
Tier 1 leverage	9.2	149,759	5.0		9.2	149,759	5.0	
December 31, 2016								
Common equity tier 1 capital	12.7%	\$149,755	6.5 %		14.3%	\$149,755	6.5 %	
Tier 1 capital	12.7	149,755	8.0		14.3	149,755	8.0	
Total capital	13.9	163,471	10.0		14.8	154,697	10.0	
Tier 1 leverage	9.3	149,755	5.0		9.3	149,755	5.0	

(1) Percent required to meet guidelines to be considered “well capitalized” under the PCA framework.

## Regulatory Developments

### Minimum Total Loss-Absorbing Capacity

The Federal Reserve has established a final rule effective January 1, 2019, which includes minimum external total loss-absorbing capacity (TLAC) requirements to improve the resolvability and resiliency of large, interconnected BHCs. We estimate our minimum required external TLAC would be the greater of 22.5 percent of risk-weighted assets or 9.5 percent of SLR leverage exposure. In addition, U.S. G-SIBs must meet a minimum long-term debt requirement. Our minimum required long-term debt is estimated to be the greater of 8.5 percent of risk-weighted assets or 4.5 percent of SLR leverage exposure. The impact of the TLAC rule is not expected to be material to our results of operations.

### Revisions to Approaches for Measuring Risk-weighted Assets

The Basel Committee has several open proposals to revise key methodologies for measuring risk-weighted assets. The proposals include a standardized approach for credit risk, standardized approach for operational risk, revisions to the credit valuation adjustment (CVA) risk framework and constraints on the use of internal models. The Basel Committee has also finalized a revised standardized model for counterparty credit risk, revisions to the securitization framework and its fundamental review of the trading book, which updates both modeled and standardized approaches for market risk measurement. These revisions are to be coupled with a proposed capital floor framework to limit the extent to which banks can reduce risk-weighted asset levels through the use of internal models, both at the input parameter and aggregate risk-weighted asset level. After the outstanding proposals are finalized by the Basel Committee, U.S. banking regulators may update the U.S. Basel 3 rules to incorporate the Basel Committee revisions.

### Revisions to the G-SIB Assessment Framework

On March 30, 2017, the Basel Committee issued a consultative document with proposed revisions to the G-SIB surcharge assessment framework. The proposed revisions would include removing the cap on the substitutability category, expanding the scope of consolidation to include insurance subsidiaries in three categories (size, interconnectedness and complexity) and modifying the substitutability category weights with the

introduction of a new trading volume indicator. The Basel Committee has also requested feedback on a new short-term wholesale funding indicator, which would be included in the interconnectedness category. The U.S. banking regulators may update the U.S. G-SIB surcharge rule to incorporate the Basel Committee revisions. For more information on our Regulatory Developments see Capital Management – Regulatory Developments in the MD&A of the Corporation's 2016 Annual Report on Form 10-K.

### Broker-dealer Regulatory Capital and Securities Regulation

The Corporation's principal U.S. broker-dealer subsidiaries are Merrill Lynch, Pierce, Fenner & Smith Incorporated (MLPF&S) and Merrill Lynch Professional Clearing Corp (MLPCC). MLPCC is a fully-guaranteed subsidiary of MLPF&S and provides clearing and settlement services. Both entities are subject to the net capital requirements of Securities and Exchange Commission (SEC) Rule 15c3-1. Both entities are also registered as futures commission merchants and are subject to the Commodity Futures Trading Commission Regulation 1.17.

MLPF&S has elected to compute the minimum capital requirement in accordance with the Alternative Net Capital Requirement as permitted by SEC Rule 15c3-1. At June 30, 2017, MLPF&S's regulatory net capital as defined by Rule 15c3-1 was \$12.3 billion and exceeded the minimum requirement of \$1.7 billion by \$10.6 billion. MLPCC's net capital of \$3.5 billion exceeded the minimum requirement of \$640 million by \$2.9 billion.

In accordance with the Alternative Net Capital Requirements, MLPF&S is required to maintain tentative net capital in excess of \$1.0 billion, net capital in excess of \$500 million and notify the SEC in the event its tentative net capital is less than \$5.0 billion. At June 30, 2017, MLPF&S had tentative net capital and net capital in excess of the minimum and notification requirements.

Merrill Lynch International (MLI), a U.K. investment firm, is regulated by the Prudential Regulation Authority and the Financial Conduct Authority, and is subject to certain regulatory capital requirements. At June 30, 2017, MLI's capital resources were \$35.4 billion which exceeded the minimum requirement of \$14.6 billion.





## Common and Preferred Stock Dividends

Table 16 is a summary of our cash dividend declarations on preferred stock during the second quarter of 2017 and through July 31, 2017. During the second quarter of 2017, we declared

\$361 million of cash dividends on preferred stock. For more information on preferred stock and a summary of our declared quarterly cash dividends on common stock, see Note 11 – Shareholders’ Equity to the Consolidated Financial Statements.

Table 16 Preferred Stock Cash Dividend Summary

Preferred Stock	June 30, 2017 Outstanding Notional Amount (in millions)	Declaration Date	Record Date	Payment Date	Per Annum Dividend Rate	Dividend Per Share
Series B <sup>(1)</sup>	\$ 1	July 26, 2017	October 11, 2017	October 25, 2017	7.00	% \$ 1.75
		April 26, 2017	July 11, 2017	July 25, 2017	7.00	1.75
Series D <sup>(2)</sup>	\$ 654	July 5, 2017	August 31, 2017	September 14, 2017	6.204	% \$ 0.38775
		April 14, 2017	May 31, 2017	June 14, 2017	6.204	0.38775
Series E <sup>(2)</sup>	\$ 317	July 5, 2017	July 31, 2017	August 15, 2017	Floating	\$ 0.25556
		April 14, 2017	April 28, 2017	May 15, 2017	Floating	0.24722
Series F	\$ 141	July 5, 2017	August 31, 2017	September 15, 2017	Floating	\$ 1,022.22222
		April 14, 2017	May 31, 2017	June 15, 2017	Floating	1,022.22222
Series G	\$ 493	July 5, 2017	August 31, 2017	September 15, 2017	Adjustable	\$ 1,022.22222
		April 14, 2017	May 31, 2017	June 15, 2017	Adjustable	1,022.22222
Series I <sup>(2)</sup>	\$ 365	July 5, 2017	September 15, 2017	October 2, 2017	6.625	% \$ 0.4140625
		April 14, 2017	June 15, 2017	July 3, 2017	6.625	0.4140625
Series K <sub>(3, 4)</sub>	\$ 1,544	July 5, 2017	July 15, 2017	July 31, 2017	Fixed-to-floating	\$ 40.00
Series L	\$ 3,080	June 16, 2017	July 1, 2017	July 31, 2017	7.25	% \$ 18.125
Series M <sub>(3, 4)</sub>	\$ 1,310	April 14, 2017	April 30, 2017	May 15, 2017	Fixed-to-floating	\$ 40.625
Series T	\$ 5,000	July 26, 2017	September 25, 2017	October 10, 2017	6.00	% \$ 1,500.00
		April 26, 2017	June 25, 2017	July 10, 2017	6.00	1,500.00
		April 14, 2017	May 15, 2017		Fixed-to-floating	\$ 26.00

Series U (3, 4)				June 1, 2017			
Series V (3, 4)	\$ 1,500	April 14, 2017	June 1, 2017	June 19, 2017	Fixed-to-floating		\$ 25.625
Series W (2)	\$ 1,100	July 5, 2017	August 15, 2017	September 11, 2017	6.625	%	\$ 0.4140625
		April 14, 2017	May 15, 2017	June 9, 2017	6.625		0.4140625
Series X (3, 4)	\$ 2,000	July 5, 2017	August 15, 2017	September 5, 2017	Fixed-to-floating		\$ 31.25
Series Y (2)	\$ 1,100	June 16, 2017	July 1, 2017	July 27, 2017	6.50	%	\$ 0.40625
Series AA (3, 4)	\$ 1,900	July 5, 2017	September 1, 2017	September 18, 2017	Fixed-to-floating		\$ 30.50
Series CC (2)	\$ 1,100	June 16, 2017	July 1, 2017	July 31, 2017	6.20	%	\$ 0.3875
Series DD (3,4)	\$ 1,000	July 5, 2017	August 15, 2017	September 11, 2017	Fixed-to-floating		\$ 31.50
Series EE (2)	\$ 900	June 16, 2017	July 1, 2017	July 25, 2017	6.00	%	\$ 0.375
Series 1 (5)	\$ 98	July 5, 2017	August 15, 2017	August 29, 2017	Floating		\$ 0.18750
		April 14, 2017	May 15, 2017	May 30, 2017	Floating		0.18750
Series 2 (5)	\$ 299	July 5, 2017	August 15, 2017	August 29, 2017	Floating		\$ 0.19167
		April 14, 2017	May 15, 2017	May 30, 2017	Floating		0.18542
Series 3 (5)	\$ 653	July 5, 2017	August 15, 2017	August 28, 2017	6.375	%	\$ 0.3984375
		April 14, 2017	May 15, 2017	May 30, 2017	6.375		0.3984375
Series 4 (5)	\$ 210	July 5, 2017	August 15, 2017	August 29, 2017	Floating		\$ 0.25556
		April 14, 2017	May 15, 2017	May 30, 2017	Floating		0.24722
Series 5 (5)	\$ 422	July 5, 2017	August 1, 2017	August 21, 2017	Floating		\$ 0.25556
		April 14, 2017	May 1, 2017	May 22, 2017	Floating		0.24722

(1) Dividends are cumulative.

(2) Dividends per depositary share, each representing a 1/1,000<sup>th</sup> interest in a share of preferred stock.

(3) Initially pays dividends semi-annually.

(4) Dividends per depositary share, each representing a 1/25<sup>th</sup> interest in a share of preferred stock.

(5) Dividends per depositary share, each representing a 1/1,200<sup>th</sup> interest in a share of preferred stock.

## Liquidity Risk

### Funding and Liquidity Risk Management

Our primary liquidity risk management objective is to meet expected or unexpected cash flow and collateral needs while continuing to support our businesses and customers under a range of economic conditions. To achieve that objective, we analyze and monitor our liquidity risk under expected and stressed conditions, maintain liquidity and access to diverse funding sources, including our stable deposit base, and seek to align liquidity-related incentives and risks.

We define liquidity as readily available assets, limited to cash and high-quality, liquid, unencumbered securities that we can use to meet our contractual and contingent financial obligations as those obligations arise. We manage our liquidity position through line of business and ALM activities, as well as through our legal entity funding strategy, on both a forward and current (including intraday) basis under both expected and stressed conditions. We believe that a centralized approach to funding and liquidity management enhances our ability to monitor liquidity requirements, maximizes access to funding sources, minimizes borrowing costs and facilitates timely responses to liquidity events. For more information regarding global funding and liquidity risk management, see Liquidity Risk – Time-to-required Funding and Stress Modeling in the MD&A of the Corporation's 2016 Annual Report on Form 10-K.

### NB Holdings, Inc.

In the third quarter of 2016, we entered into intercompany arrangements with certain key subsidiaries under which we transferred certain of our parent company assets, and agreed to transfer certain additional parent company assets not needed to satisfy anticipated near-term expenditures, to NB Holdings, Inc., a wholly-owned holding company subsidiary (NB Holdings). The parent company is expected to continue to have access to the same flow of dividends, interest and other amounts of cash necessary to service its debt, pay dividends and perform other obligations as it would have had if it had not entered into these arrangements and transferred any assets.

In consideration for the transfer of assets, NB Holdings issued a subordinated note to the parent company in a principal amount equal to the value of the transferred assets. The aggregate principal amount of the note will increase by the amount of any future asset transfers. NB Holdings also provided the parent company with a committed line of credit that allows the parent company to draw funds necessary to service near-term cash needs. These arrangements support our preferred single point of entry resolution strategy, under which only the parent company would be resolved under the U.S. Bankruptcy Code. These arrangements include provisions to terminate the line of credit, forgive the subordinated note and require the parent company to transfer its remaining financial assets to NB Holdings if our projected liquidity resources deteriorate so severely that resolution of the parent company becomes imminent.

### Global Liquidity Sources and Other Unencumbered Assets

We maintain liquidity available to the Corporation, including the parent company and selected subsidiaries, in the form of cash and high-quality, liquid, unencumbered securities. Our liquidity buffer, referred to as Global Liquidity Sources (GLS), is comprised of assets that are readily available to the parent company and selected subsidiaries, including holding company, bank and broker-

dealer subsidiaries, even during stressed market conditions. Our cash is primarily on deposit with the Federal Reserve and, to a lesser extent, central banks outside of the U.S. We limit the composition of high-quality, liquid, unencumbered securities to U.S. government securities, U.S. agency securities, U.S. agency MBS and a select group of non-U.S. government securities. We can quickly obtain cash for these securities, even in stressed conditions, through repurchase agreements or outright sales. We hold our GLS in legal entities that allow us to meet the liquidity requirements of our global businesses, and we consider the impact of potential regulatory, tax, legal and other restrictions that could limit the transferability of funds among entities.

Our GLS are substantially the same in composition to what qualifies as High Quality Liquid Assets (HQLA) under the final U.S. Liquidity Coverage Ratio (LCR) rules. However, HQLA for purposes of calculating LCR is not reported at market value, but at a lower value which incorporates regulatory deductions and the exclusion of excess liquidity held at certain subsidiaries. Our average consolidated HQLA, on a net basis, was \$425 billion for the three months ended June 30, 2017. For more information on the final LCR rules, see Liquidity Risk – Basel 3 Liquidity Standards on page 36.

Our GLS were \$514 billion and \$499 billion at June 30, 2017 and December 31, 2016 and were as shown in Table 17.

Table 17 Global Liquidity Sources

(Dollars in billions)	June 30 2017	December 31 2016	Average Three Months Ended June 30 2017
Parent company and NB Holdings	\$ 86	\$ 76	\$ 80
Bank subsidiaries	376	372	383
Other regulated entities	52	51	50
Total Global Liquidity Sources	\$ 514	\$ 499	\$ 513

As shown in Table 17, parent company and NB Holdings liquidity totaled \$86 billion and \$76 billion at June 30, 2017 and December 31, 2016. The increase in parent company and NB Holdings liquidity was primarily due to debt issuance outpacing maturities. Typically, parent company and NB Holdings liquidity is in the form of cash deposited with BANA.

Liquidity held at our bank subsidiaries totaled \$376 billion and \$372 billion at June 30, 2017 and December 31, 2016. The increase in bank subsidiaries' liquidity was primarily due to net debt issuances. Liquidity at bank subsidiaries excludes the cash deposited by the parent company and NB Holdings. Our bank subsidiaries can also generate incremental liquidity by pledging a range of unencumbered loans and securities to certain Federal Home Loan Banks (FHLBs) and the Federal Reserve Discount Window. The cash we could have obtained by borrowing against this pool of specifically-identified eligible assets was \$290 billion and \$310 billion at June 30, 2017 and December 31, 2016 with the decrease due to FHLB borrowings, which reduced available borrowing capacity, and adjustments to our valuation model. We have established operational procedures to enable us to borrow against these assets, including regularly monitoring our total pool of eligible loans and securities collateral. Eligibility is defined in guidelines from the FHLBs and the Federal Reserve and is subject to change at their discretion. Due to regulatory restrictions, liquidity

generated by the bank subsidiaries can generally be used only to fund obligations within the bank subsidiaries and transfers to the parent company or nonbank subsidiaries may be subject to prior regulatory approval.

Liquidity held at our other regulated entities, comprised primarily of broker-dealer subsidiaries, totaled \$52 billion and \$51 billion at June 30, 2017 and December 31, 2016. Our other regulated entities also held unencumbered investment-grade securities and equities that we believe could be used to generate additional liquidity. Liquidity held in an other regulated entity is primarily available to meet the obligations of that entity and transfers to the parent company or to any other subsidiary may be subject to prior regulatory approval due to regulatory restrictions and minimum requirements.

Table 18 presents the composition of GLS at June 30, 2017 and December 31, 2016.

Global Liquidity  
Table 18 Sources  
Composition

(Dollars in billions)	June 30 2017	December 31 2016
Cash on deposit U.S.	\$ 116	\$ 106
Treasury securities U.S. agency securities and mortgage-backed securities	63	58
Non-U.S. government securities	324	318
Total Global Liquidity Sources	\$ 514	\$ 499

#### Time-to-required Funding and Liquidity Stress Analysis

We use a variety of metrics to determine the appropriate amounts of liquidity to maintain at the parent company and our subsidiaries. One metric we use to evaluate the appropriate level of liquidity at the parent company and NB Holdings is “time-to-required funding (TTF).” This debt coverage measure indicates the number of months the parent company can continue to meet its unsecured contractual obligations as they come due using only the parent company and NB Holdings' liquidity sources without issuing any new debt or accessing any additional liquidity sources. We define unsecured contractual obligations for purposes of this metric as maturities of senior or subordinated debt issued or guaranteed by Bank of America Corporation. These include certain unsecured debt instruments, primarily structured liabilities, which we may be required to settle for cash prior to maturity. TTF was 49 months at June 30, 2017 compared to 35 months at December 31, 2016. The increase in TTF was driven by debt issuances outpacing maturities.

We also utilize liquidity stress analysis to assist us in determining the appropriate amounts of liquidity to maintain at the parent company and our subsidiaries. The liquidity stress testing process is an integral part of analyzing our potential contractual and contingent cash outflows. We evaluate the liquidity requirements under a range of scenarios with varying levels of severity and time horizons. The scenarios we consider and utilize incorporate market-wide and

Corporation-specific events, including potential credit rating downgrades for the parent company and our subsidiaries, and more severe events including potential resolution scenarios. The scenarios are based on our historical experience, experience of distressed and failed financial institutions, regulatory guidance, and both expected and unexpected future events.

The types of potential contractual and contingent cash outflows we consider in our scenarios may include, but are not limited to,

upcoming contractual maturities of unsecured debt and reductions in new debt issuance; diminished access to secured financing markets; potential deposit withdrawals; increased draws on loan commitments, liquidity facilities and letters of credit; additional collateral that counterparties could call if our credit ratings were downgraded; collateral and margin requirements arising from market value changes; and potential liquidity required to maintain businesses and finance customer activities. Changes in certain market factors, including, but not limited to, credit rating downgrades, could negatively impact potential contractual and contingent outflows and the related financial instruments, and in some cases these impacts could be material to our financial results.

We consider all sources of funds that we could access during each stress scenario and focus particularly on matching available sources with corresponding liquidity requirements by legal entity. We also use the stress modeling results to manage our asset and liability profile and establish limits and guidelines on certain funding sources and businesses.

#### Basel 3 Liquidity Standards

Basel 3 has two liquidity risk-related standards: the LCR and the Net Stable Funding Ratio (NSFR).

The LCR is calculated as the amount of a financial institution's unencumbered HQLA relative to the estimated net cash outflows the institution could encounter over a 30-day period of significant liquidity stress, expressed as a percentage.

As of June 30, 2017, the consolidated Corporation and its insured depository institutions were above the 2017 LCR requirements. Our LCR may fluctuate from period to period due to normal business flows from customer activity.

Beginning with the second quarter 2017 results, we are required to disclose publicly, on a quarterly basis, quantitative information about our LCR calculation and a discussion of the factors that have a significant effect on our LCR. This information will be available on our Investor Relations website on a quarterly basis beginning in August 2017.

U.S. banking regulators have issued a proposal for an NSFR requirement applicable to U.S. financial institutions following the Basel Committee's final standard. The U.S. NSFR would apply to the Corporation on a consolidated basis and to our insured depository institutions beginning on January 1, 2018, if finalized as proposed. We expect to meet the NSFR requirement within the regulatory timeline. The standard is intended to reduce funding risk over a longer time horizon. The NSFR is designed to ensure an appropriate amount of stable funding, generally capital and liabilities maturing beyond one year, given the mix of assets and off-balance sheet items.

#### Diversified Funding Sources

We fund our assets primarily with a mix of deposits and secured and unsecured liabilities through a centralized, globally coordinated funding approach diversified across products, programs, markets, currencies and investor groups. The primary benefits of our centralized funding approach include greater control, reduced funding costs, wider name recognition by investors and greater flexibility to meet the variable funding requirements of subsidiaries. Where regulations, time zone differences or other business considerations make parent company funding impractical, certain other subsidiaries may issue their own debt.

We fund a substantial portion of our lending activities through our deposits, which were \$1.26 trillion at both June 30, 2017 and

December 31, 2016. Deposits are primarily generated by our Consumer Banking, GWIM and Global Banking segments. These deposits are diversified by clients, product type and geography, and the majority of our U.S. deposits are insured by the FDIC. We consider a substantial portion of our deposits to be a stable, low-cost and consistent source of funding. We believe this deposit funding is generally less sensitive to interest rate changes, market volatility or changes in our credit ratings than wholesale funding sources. Our lending activities may also be financed through secured borrowings, including credit card securitizations and securitizations with GSEs, the FHA and private-label investors, as well as FHLB loans.

Our trading activities in other regulated entities are primarily funded on a secured basis through securities lending and repurchase agreements and these amounts will vary based on customer activity and market conditions. We believe funding these activities in the secured financing markets is more cost-efficient and less sensitive to changes in our credit ratings than unsecured financing. Repurchase agreements are generally short-term and often overnight. Disruptions in secured financing markets for financial institutions have occurred in prior market cycles which resulted in adverse changes in terms or significant reductions in the availability of such financing. We manage the liquidity risks arising from secured funding by sourcing funding globally from a diverse group of counterparties, providing a range of securities

collateral and pursuing longer durations, when appropriate. For more information on secured financing agreements, see Note 9 – Federal Funds Sold or Purchased, Securities Financing Agreements and Short-term Borrowings to the Consolidated Financial Statements.

We issue long-term unsecured debt in a variety of maturities and currencies to achieve cost-efficient funding and to maintain an appropriate maturity profile. While the cost and availability of unsecured funding may be negatively impacted by general market conditions or by matters specific to the financial services industry or the Corporation, we seek to mitigate refinancing risk by actively managing the amount of our borrowings that we anticipate will mature within any month or quarter.

During the three and six months ended June 30, 2017, we issued \$16.0 billion and \$33.4 billion of long-term debt consisting of \$10.6 billion and \$23.5 billion for Bank of America Corporation, substantially all of which was TLAC compliant, \$3.0 billion and \$5.1 billion for Bank of America, N.A. and \$2.4 billion and \$4.8 billion of other debt. Table 19 presents the carrying value of aggregate annual contractual maturities of long-term debt as of June 30, 2017. During the six months ended June 30, 2017, we had total long-term debt maturities and purchases of \$29.4 billion consisting of \$12.3 billion for Bank of America Corporation, \$11.8 billion for Bank of America, N.A. and \$5.3 billion of other debt.

Table 19 Long-term Debt by Maturity

(Dollars in millions)	Remainder of 2017	2018	2019	2020	2021	Thereafter	Total
<b>Bank of America Corporation</b>							
Senior notes	\$ 13,253	\$ 19,690	\$ 18,098	\$ 12,359	\$ 10,617	\$ 67,183	\$ 141,200
Senior structured notes	1,878	3,011	1,422	995	423	8,498	16,227
Subordinated notes	—	2,803	1,502	—	362	21,353	26,020
Junior subordinated notes	—	—	—	—	—	3,834	3,834
<b>Total Bank of America Corporation</b>	<b>15,131</b>	<b>25,504</b>	<b>21,022</b>	<b>13,354</b>	<b>11,402</b>	<b>100,868</b>	<b>187,281</b>
<b>Bank of America, N.A.</b>							
Senior notes	—	5,717	—	—	—	20	5,737
Subordinated notes	—	—	1	—	—	1,694	1,695
Advances from Federal Home Loan Banks	8	1,509	1,513	11	2	114	3,157
Securitizations and other Bank VIEs (1)	1,500	2,300	3,199	1,998	—	43	9,040
Other	9	126	113	10	—	150	408



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Total Bank of America, N.A.	1,517	9,652	4,826	2,019	2	2,021	20,037
Other debt							
Senior notes	1	—	—	—	—	—	1
Structured liabilities	699	3,618	1,761	1,321	846	7,603	15,848
Nonbank VIEs <sup>(1)</sup>	13	22	4	—	—	686	725
Other	—	—	—	—	—	31	31
Total other debt	713	3,640	1,765	1,321	846	8,320	16,605
Total long-term debt	\$ 17,361	\$ 38,796	\$ 27,613	\$ 16,694	\$ 12,250	\$ 111,209	\$ 223,923

<sup>(1)</sup> Represents the total long-term debt included in the liabilities of consolidated variable interest entities (VIEs) on the Consolidated Balance Sheet.

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Table 20 presents our long-term debt by major currency at June 30, 2017 and December 31, 2016.

Table 20 Long-term Debt by  
Major Currency

(Dollars in millions)	June 30 2017	December 31 2016
U.S. Dollar	\$ 173,017	\$ 172,082
Euro	34,959	28,236
British Pound	6,797	6,588
Australian Dollar	2,942	2,900
Japanese Yen	2,911	3,919
Canadian Dollar	1,548	1,049
Other	1,749	2,049
Total long-term debt	\$223,923	\$ 216,823

Total long-term debt increased \$7.1 billion, or three percent, in the six months ended June 30, 2017, primarily due to issuances outpacing maturities. We may, from time to time, purchase outstanding debt instruments in various transactions, depending on prevailing market conditions, liquidity and other factors. In addition, our other regulated entities may make markets in our debt instruments to provide liquidity for investors. For information on long-term debt funding, see Note 11 – Long-term Debt to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K and for information regarding funding and liquidity risk management, see Liquidity Risk – Time-to-required Funding and Stress Modeling in the MD&A of the Corporation's 2016 Annual Report on Form 10-K.

We use derivative transactions to manage the duration, interest rate and currency risks of our borrowings, considering the characteristics of the assets they are funding. For more information on our ALM activities, see Interest Rate Risk Management for the Banking Book on page 63.

We may also issue unsecured debt in the form of structured notes for client purposes, certain of which qualify as TLAC eligible debt. During the three and six months ended June 30, 2017, we issued \$1.3 billion and \$2.3 billion of structured notes, which are debt obligations that pay investors returns linked to other debt or equity securities, indices, currencies or commodities. We typically hedge the returns we are obligated to pay on these liabilities with derivatives and/or investments in the underlying instruments, so that from a funding perspective, the cost is similar to our other unsecured long-term debt. We could be required to settle certain structured note obligations for cash or other securities prior to maturity under certain circumstances, which we consider for liquidity planning purposes. We believe, however, that a portion of

such borrowings will remain outstanding beyond the earliest put or redemption date.

Substantially all of our senior and subordinated debt obligations contain no provisions that could trigger a requirement for an early repayment, require additional collateral support, result in changes to terms, accelerate maturity or create additional financial obligations upon an adverse change in our credit ratings, financial ratios, earnings, cash flows or stock price.

Contingency Planning

We maintain contingency funding plans that outline our potential responses to liquidity stress events at various levels of severity. These policies and plans are based on stress scenarios and include potential funding strategies and communication and notification procedures that we would implement in the event we experienced stressed liquidity conditions. We periodically review and test the contingency funding plans to validate efficacy and assess readiness. Our U.S. bank subsidiaries can access contingency funding through the Federal Reserve Discount Window. Certain non-U.S. subsidiaries have access to central bank facilities in the jurisdictions in which they operate. While we do not rely on these sources in our liquidity modeling, we maintain the policies, procedures and governance processes that would enable us to access these sources if necessary.

#### Credit Ratings

Credit ratings and outlooks are opinions expressed by rating agencies on our creditworthiness and that of our obligations or securities, including long-term debt, short-term borrowings, preferred stock and other securities, including asset securitizations. Table 21 presents the Corporation's current long-term/short-term senior debt ratings and outlooks expressed by the rating agencies. These ratings have not changed from those disclosed in the Corporation's 2016 Annual Report on Form 10-K. For more information on credit ratings, see Liquidity Risk – Credit Ratings in the MD&A of the Corporation's 2016 Annual Report on Form 10-K.

For more information on the additional collateral and termination payments that could be required in connection with certain over-the-counter (OTC) derivative contracts and other trading agreements as a result of such a credit rating downgrade, see Note 2 – Derivatives to the Consolidated Financial Statements herein and Item 1A. Risk factors of the Corporation's 2016 Annual Report on Form 10-K.

Table 21 Senior Debt Ratings

	Moody's Investors Service			Standard & Poor's Global Ratings			Fitch Ratings		
	Long-term	Short-term	Outlook	Long-term	Short-term	Outlook	Long-term	Short-term	Outlook
Bank of America Corporation	Baa1	P-2	Positive	BBB+	A-2	Stable	A	F1	Stable
Bank of America, N.A.	A1	P-1	Positive	A+	A-1	Stable	A+	F1	Stable
Merrill Lynch, Pierce, Fenner & Smith Incorporated	NR	NR	NR	A+	A-1	Stable	A+	F1	Stable
Merrill Lynch International	NR	NR	NR	A+	A-1	Stable	A	F1	Stable

NR = not rated

### Credit Risk Management

For more information on our credit risk management activities, see Consumer Portfolio Credit Risk Management below, Commercial Portfolio Credit Risk Management on page 48, Non-U.S. Portfolio on page 56, Provision for Credit Losses on page 57, Allowance for Credit Losses on page 57, and Note 4 – Outstanding Loans and Leases and Note 5 – Allowance for Credit Losses to the Consolidated Financial Statements.

#### Consumer Portfolio Credit Risk Management

Credit risk management for the consumer portfolio begins with initial underwriting and continues throughout a borrower's credit cycle. Statistical techniques in conjunction with experiential judgment are used in all aspects of portfolio management including underwriting, product pricing, risk appetite, setting credit limits, and establishing operating processes and metrics to quantify and balance risks and returns. Statistical models are built using detailed behavioral information from external sources such as credit bureaus and/or internal historical experience. These models are a component of our consumer credit risk management process and are used in part to assist in making both new and ongoing credit decisions, as well as portfolio management strategies, including authorizations and line management, collection practices and strategies, and determination of the allowance for loan and lease losses and allocated capital for credit risk.

#### Consumer Credit Portfolio

Improvement in the U.S. unemployment rate and home prices continued during the three and six months ended June 30, 2017

resulting in improved credit quality and lower credit losses in the consumer real estate portfolio compared to the same periods in 2016. The 30 and 90 days or more past due balances declined across most consumer loan portfolios during the six months ended June 30, 2017 as a result of improved delinquency trends.

The sale of the non-U.S. consumer credit card business, improved credit quality, continued loan balance run-off and sales in the consumer real estate portfolio drove a \$527 million decrease in the consumer allowance for loan and lease losses during the six months ended June 30, 2017 to \$5.7 billion at June 30, 2017. For additional information, see Allowance for Credit Losses on page 57.

For more information on our accounting policies regarding delinquencies, nonperforming status, charge-offs and troubled debt restructurings (TDRs) for the consumer portfolio, see Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.

Table 22 presents our outstanding consumer loans and leases, and the PCI loan portfolio. In addition to being included in the "Outstandings" columns in Table 22, PCI loans are also shown separately in the "Purchased Credit-impaired Loan Portfolio" columns. The impact of the PCI loan portfolio on certain credit statistics is reported where appropriate. For more information on PCI loans, see Consumer Portfolio Credit Risk Management – Purchased Credit-impaired Loan Portfolio on page 45 and Note 4 – Outstanding Loans and Leases to the Consolidated Financial Statements.

Table 22 Consumer Loans and Leases

	Outstandings		Purchased Credit-impaired Loan Portfolio	
	June 30 2017	December 31 2016	June 30 2017	December 31 2016
(Dollars in millions)				
Residential mortgage <sup>(1)</sup>	\$197,446	\$ 191,797	\$9,274	\$ 10,127
Home equity	61,942	66,443	3,170	3,611
U.S. credit card	90,776	92,278	n/a	n/a
Non-U.S. credit card	—	9,214	n/a	n/a
Direct/Indirect consumer <sup>(2)</sup>	93,493	94,089	n/a	n/a
Other consumer <sup>(3)</sup>	2,658	2,499	n/a	n/a
Consumer loans excluding loans accounted for under the fair value	446,315	456,320	12,444	13,738

option

Loans accounted for under the fair value option <sup>(4)</sup>	1,035	1,051	n/a	n/a
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Total consumer loans and leases <sup>(5)</sup>	\$447,350	\$ 457,371	\$ 12,444	\$ 13,738
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(1) Outstandings includes pay option loans of \$1.6 billion and \$1.8 billion at June 30, 2017 and December 31, 2016. We no longer originate pay option loans.

(2) Outstandings include auto and specialty lending loans of \$49.1 billion and \$48.9 billion, unsecured consumer lending loans of \$509 million and \$585 million, U.S. securities-based lending loans of \$39.8 billion and \$40.1 billion, non-U.S. consumer loans of \$2.9 billion and \$3.0 billion, student loans of \$463 million and \$497 million and other consumer loans of \$657 million and \$1.1 billion at June 30, 2017 and December 31, 2016.

(3) Outstandings include consumer finance loans of \$420 million and \$465 million, consumer leases of \$2.1 billion and \$1.9 billion and consumer overdrafts of \$155 million and \$157 million at June 30, 2017 and December 31, 2016.

(4) Consumer loans accounted for under the fair value option include residential mortgage loans of \$666 million and \$710 million and home equity loans of \$369 million and \$341 million at June 30, 2017 and December 31, 2016.

For more information on the fair value option, see Note 15 – Fair Value Option to the Consolidated Financial Statements.

(5) Includes \$9.2 billion of non-U.S. credit card loans, which were included in assets of business held for sale on the Consolidated Balance Sheet at December 31, 2016. On June 1, 2017, the Corporation completed the sale of its non-U.S. consumer credit card business.

n/a = not applicable

Table 23 presents consumer nonperforming loans and accruing consumer loans past due 90 days or more. Nonperforming loans do not include past due consumer credit card loans, other unsecured loans and in general, consumer loans not secured by real estate (loans discharged in Chapter 7 bankruptcy are included) as these loans are typically charged off no later than the end of the month in which the loan becomes 180 days past due. Real estate-secured past due consumer loans that are insured by the FHA or individually insured under long-term standby agreements

with FNMA and FHLMC (collectively, the fully-insured loan portfolio) are reported as accruing as opposed to nonperforming since the principal repayment is insured. Fully-insured loans included in accruing past due 90 days or more are primarily from our repurchases of delinquent FHA loans pursuant to our servicing agreements with GNMA. Additionally, nonperforming loans and accruing balances past due 90 days or more do not include the PCI loan portfolio or loans accounted for under the fair value option even though the customer may be contractually past due.

Table 23 Consumer Credit Quality

(Dollars in millions)	Nonperforming		Accruing Past Due 90 Days or More		
	June 30	December 31	June 30	December 31	
	2017	2016	2017	2016	
Residential mortgage <sup>(1)</sup>	\$2,579	\$ 3,056	\$3,699	\$ 4,793	
Home equity	2,681	2,918	—	—	
U.S. credit card	n/a	n/a	772	782	
Non-U.S. credit card	n/a	n/a	—	66	
Direct/Indirect consumer	19	28	32	34	
Other consumer	3	2	3	4	
Total <sup>(2)</sup>	\$5,282	\$ 6,004	\$4,506	\$ 5,679	
Consumer loans and leases as a percentage of outstanding consumer loans and leases <sup>(2)</sup>	1.18	% 1.32	% 1.01	% 1.24	%
Consumer loans and leases as a percentage of outstanding loans and leases, excluding PCI and fully-insured loan portfolios <sup>(2)</sup>	1.30	1.45	0.20	0.21	

Residential mortgage loans accruing past due 90 days or more are fully-insured loans. At June 30, 2017 and <sup>(1)</sup> December 31, 2016, residential mortgage included \$2.4 billion and \$3.0 billion of loans on which interest has been curtailed by the FHA, and therefore are no longer accruing interest, although principal is still insured, and \$1.3 billion and \$1.8 billion of loans on which interest was still accruing.

Balances exclude consumer loans accounted for under the fair value option. At June 30, 2017 and December 31, <sup>(2)</sup> 2016, \$44 million and \$48 million of loans accounted for under the fair value option were past due 90 days or more and not accruing interest.

n/a = not applicable

Table 24 presents net charge-offs and related ratios for consumer loans and leases.

Consumer Net  
Table 24 Charge-offs and  
Related Ratios

Net Charge-offs <sup>(1)</sup>		Net Charge-off Ratios <sup>(1, 2)</sup>	
Three Months Ended	Six Months Ended	Three Months Ended	Six Months Ended

	Ended June 30	June 30	June 30	June 30	June 30	June 30	June 30	June 30
(Dollars in millions)	2017	2016	2017	2016	2017	2016	2017	2016
Residential mortgage	\$ (19 )	\$ 34	\$ (2 )	\$ 125	(0.04)%	0.07%	0.00%	0.14%
Home equity	50	126	114	238	0.32	0.70	0.36	0.65
U.S. credit card	640	573	1,246	1,160	2.87	2.66	2.81	2.68
Non-U.S. credit card	31	46	75	91	1.89	1.85	1.90	1.85
Direct/Indirect consumer	32	23	80	57	0.14	0.10	0.17	0.13
Other consumer	17	47	65	95	2.64	8.40	5.08	8.73
Total	\$ 751	\$ 849	\$ 1,578	\$ 1,766	0.67	0.76	0.71	0.79

(1) Net charge-offs exclude write-offs in the PCI loan portfolio. For more information on PCI write-offs, see Consumer Portfolio Credit Risk Management – Purchased Credit-impaired Loan Portfolio on page 45.

(2) Net charge-off ratios are calculated as annualized net charge-offs divided by average outstanding loans and leases excluding loans accounted for under the fair value option.

Net charge-offs, as shown in Tables 24 and 25, exclude write-offs in the PCI loan portfolio of \$41 million and \$50 million in residential mortgage for the three and six months ended June 30, 2017 compared to \$37 million and \$76 million for the same periods in 2016. Net charge-offs, as shown in Tables 24 and 25, exclude write-offs in the PCI loan portfolio of \$14 million and \$38 million in home equity for the three and six months ended June 30, 2017 compared to \$45 million and \$111 million for the same periods in 2016. Net charge-off ratios including the PCI write-offs

were 0.04 percent and 0.05 percent for residential mortgage for the three and six months ended June 30, 2017 compared to 0.15 percent and 0.22 percent for the same periods in 2016. Net charge-off ratios including the PCI write-offs were 0.41 percent and 0.48 percent for home equity for the three and six months ended June 30, 2017 compared to 0.95 percent for both periods in 2016. For more information on PCI write-offs, see Consumer Portfolio Credit Risk Management – Purchased Credit-impaired Loan Portfolio on page 45.

Table 25 presents outstandings, nonperforming balances, net charge-offs, allowance for loan and lease losses and provision for loan and lease losses for the core and non-core portfolios within the consumer real estate portfolio. We categorize consumer real estate loans as core and non-core based on loan and customer characteristics such as origination date, product type, LTV, FICO score and delinquency status consistent with our current consumer and mortgage servicing strategy. Generally, loans that were originated after January 1, 2010, qualified under government-sponsored enterprise underwriting guidelines, or otherwise met our underwriting guidelines in place in 2015 are characterized as core loans. Loans held in legacy private-label securitizations, government-insured loans originated prior to 2010, loan products no longer originated, and loans originated prior to 2010 and classified as nonperforming or modified in a TDR prior to 2016

are generally characterized as non-core loans, and are principally run-off portfolios. Core loans as reported in Table 25 include loans held in the Consumer Banking and GWIM segments, as well as loans held for ALM activities in All Other. For more information on core and non-core loans, see Note 4 – Outstanding Loans and Leases to the Consolidated Financial Statements.

As shown in Table 25, outstanding core consumer real estate loans increased \$7.0 billion during the six months ended June 30, 2017 driven by an increase of \$9.7 billion in residential mortgage, partially offset by a \$2.7 billion decrease in home equity. The increase in residential mortgage was due to a decision to retain a higher percentage of residential mortgage production in Consumer Banking and GWIM. The decrease in home equity was driven by paydowns outpacing new originations and draws on existing lines.

Table 25 Consumer Real Estate Portfolio <sup>(1)</sup>

	Outstandings		Nonperforming		Net Charge-offs <sup>(2)</sup>			
					Three Months Ended		Six Months Ended	
	June 30 2017	December 31 2016	June 30 2017	December 31 2016	June 30 2017	June 30 2016	June 30 2017	June 30 2016
(Dollars in millions)								
Core portfolio								
Residential mortgage	\$166,209	\$156,497	\$1,051	\$1,274	\$(2)	\$7	\$2	\$(11)
Home equity	46,642	49,373	970	969	28	28	59	46
Total core portfolio	212,851	205,870	2,021	2,243	26	35	61	35
Non-core portfolio								
Residential mortgage	31,237	35,300	1,528	1,782	(17)	27	(4)	136
Home equity	15,300	17,070	1,711	1,949	22	98	55	192
Total non-core portfolio	46,537	52,370	3,239	3,731	5	125	51	328
Consumer real estate portfolio								



Residential mortgage	197,446	191,797	2,579	3,056	(19 )	34	(2 )	125
Home equity	61,942	66,443	2,681	2,918	50	126	114	238
Total consumer real estate portfolio	\$259,388	\$ 258,240	\$5,260	\$ 5,974	\$31	\$160	\$112	\$363

	Allowance for Loan and Lease Losses		Provision for Loan and Lease Losses			
	June 30 2017	December 31 2016	Three Months Ended		Six Months Ended	
			June 30 2017	2016	June 30 2017	2016
Core portfolio						
Residential mortgage	\$239	\$ 252	\$(10 )	\$—	\$(11 )	\$(53 )
Home equity	491	560	2	8	(9 )	8
Total core portfolio	730	812	(8 )	8	(20 )	(45 )
Non-core portfolio						
Residential mortgage	662	760	(85 )	(50 )	(52 )	(54 )
Home equity	917	1,178	(77 )	37	(169 )	(56 )
Total non-core portfolio	1,579	1,938	(162 )	(13 )	(221 )	(110 )
Consumer real estate portfolio						
Residential mortgage	901	1,012	(95 )	(50 )	(63 )	(107 )
Home equity	1,408	1,738	(75 )	45	(178 )	(48 )
Total consumer real estate portfolio	\$2,309	\$ 2,750	\$(170)	\$(5 )	\$(241)	\$(155)

- Outstandings and nonperforming loans exclude loans accounted for under the fair value option. Consumer loans
- (1) accounted for under the fair value option include residential mortgage loans of \$666 million and \$710 million and home equity loans of \$369 million and \$341 million at June 30, 2017 and December 31, 2016. For more information on the fair value option, see Note 15 – Fair Value Option to the Consolidated Financial Statements.
- (2) Net charge-offs exclude write-offs in the PCI loan portfolio. For more information on PCI write-offs, see Consumer Portfolio Credit Risk Management – Purchased Credit-impaired Loan Portfolio on page 45.

We believe that the presentation of information adjusted to exclude the impact of the PCI loan portfolio, the fully-insured loan portfolio and loans accounted for under the fair value option is more representative of the ongoing operations and credit quality of the business. As a result, in the following discussions of the

residential mortgage and home equity portfolios, we provide information that excludes the impact of the PCI loan portfolio, the fully-insured loan portfolio and loans accounted for under the fair value option in certain credit quality statistics. We separately disclose information on the PCI loan portfolio on page 45.

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### Residential Mortgage

The residential mortgage portfolio makes up the largest percentage of our consumer loan portfolio at 44 percent of consumer loans and leases at June 30, 2017. Approximately 35 percent of the residential mortgage portfolio is in GWIM and represents residential mortgages originated for the home purchase and refinancing needs of our wealth management clients. Approximately 32 percent of the residential mortgage portfolio is in All Other and is comprised of originated loans, purchased loans used in our overall ALM activities, delinquent FHA loans repurchased pursuant to our servicing agreements with GNMA as well as loans repurchased related to our representations and warranties. The remaining portion of the portfolio is primarily in Consumer Banking.

Outstanding balances in the residential mortgage portfolio, excluding loans accounted for under the fair value option, increased \$5.6 billion during the six months ended June 30, 2017 as retention of new originations was partially offset by loan sales of \$1.7 billion, and run-off.

At June 30, 2017 and December 31, 2016, the residential mortgage portfolio included \$26.1 billion and \$28.7 billion of outstanding fully-insured loans. On this portion of the residential

mortgage portfolio, we are protected against principal loss as a result of either FHA insurance or long-term standby agreements that provide for the transfer of credit risk to FNMA and FHLMC. At June 30, 2017 and December 31, 2016, \$19.5 billion and \$22.3 billion had FHA insurance with the remainder protected by long-term standby agreements. At June 30, 2017 and December 31, 2016, \$6.0 billion and \$7.4 billion of the FHA-insured loan population were repurchases of delinquent FHA loans pursuant to our servicing agreements with GNMA.

Table 26 presents certain residential mortgage key credit statistics on both a reported basis excluding loans accounted for under the fair value option, and excluding the PCI loan portfolio, our fully-insured loan portfolio and loans accounted for under the fair value option. Additionally, in the “Reported Basis” columns in the table below, accruing balances past due and nonperforming loans do not include the PCI loan portfolio, in accordance with our accounting policies, even though the customer may be contractually past due. As such, the following discussion presents the residential mortgage portfolio excluding the PCI loan portfolio, the fully-insured loan portfolio and loans accounted for under the fair value option. For more information on the PCI loan portfolio, see page 45.

Table 26 Residential Mortgage – Key  
Credit Statistics

	Reported Basis <sup>(1)</sup>		Excluding Purchased Credit-impaired and Fully-insured Loans	
	June 30 2017	December 31 2016	June 30 2017	December 31 2016
(Dollars in millions)				
Outstandings	\$ 197,446	\$ 191,797	\$ 162,107	\$ 152,941
Accruing past due 30 days or more	6,237	8,232	1,267	1,835
Accruing past due 90 days or more	3,699	4,793	—	—
Nonperforming loans	2,579	3,056	2,579	3,056
Percent of portfolio				
Refreshed LTV greater than 90 but less than or equal to 100	4	% 5	% 3	% 3
Refreshed LTV greater than 100	3	4	2	3
	7	9	3	4

Refreshed FICO  
below 620  
2006 and 2007  
vintages <sup>(2)</sup>

12                      13                      10                      12

Reported Basis				Excluding Purchased Credit-impaired and Fully-Insured Loans			
Three Months Ended June 30		Six Months Ended June 30		Three Months Ended June 30		Six Months Ended June 30	
2017	2016	2017	2016	2017	2016	2017	2016

Net charge-off ratio <sup>(3)</sup>

(0.04)%	0.07%	0.00%	0.14%	(0.05)%	0.10%	0.00%	0.18%	%
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- (1) Outstandings, accruing past due, nonperforming loans and percentages of portfolio exclude loans accounted for under the fair value option.
- (2) These vintages of loans account for \$855 million, or 33 percent, and \$931 million, or 31 percent, of nonperforming residential mortgage loans at June 30, 2017 and December 31, 2016.
- (3) Net charge-off ratios are calculated as annualized net charge-offs divided by average outstanding loans excluding loans accounted for under the fair value option.

Nonperforming residential mortgage loans decreased \$477 million during the six months ended June 30, 2017 as outflows, including sales of \$242 million, outpaced new inflows. Of the nonperforming residential mortgage loans at June 30, 2017, \$857 million, or 33 percent, were current on contractual payments. Loans accruing past due 30 days or more decreased \$568 million primarily due to an improvement in collections associated with the consumer real estate servicer conversion that occurred during the fourth quarter of 2016.

Net charge-offs decreased \$53 million to a \$19 million net recovery and decreased \$127 million to a \$2 million net recovery for the three and six months ended June 30, 2017, compared to the same periods in 2016. These decreases in net charge-offs were primarily driven by favorable portfolio trends and decreased write-downs on loans greater than 180 days past due driven by improvement in home prices and the U.S. economy. Additionally,

net charge-offs declined due to net recoveries of \$14 million related to nonperforming loan sales during the six months ended June 30, 2017, compared to nonperforming loan sale-related charge-offs of \$42 million for the same period in 2016.

Loans with a refreshed LTV greater than 100 percent represented two percent and three percent of the residential mortgage loan portfolio at June 30, 2017 and December 31, 2016. Of the loans with a refreshed LTV greater than 100 percent, 99 percent and 98 percent were performing at June 30, 2017 and December 31, 2016. Loans with a refreshed LTV greater than 100 percent reflect loans where the outstanding carrying value of the loan is greater than the most recent valuation of the property securing the loan. The majority of these loans have a refreshed LTV greater than 100 percent primarily due to home price deterioration since 2006, partially offset by subsequent appreciation.

Of the \$162.1 billion in total residential mortgage loans outstanding at June 30, 2017, as shown in Table 27, 35 percent were originated as interest-only loans. The outstanding balance of interest-only residential mortgage loans that have entered the amortization period was \$10.9 billion, or 19 percent, at June 30, 2017. Residential mortgage loans that have entered the amortization period generally have experienced a higher rate of early stage delinquencies and nonperforming status compared to the residential mortgage portfolio as a whole. At June 30, 2017, \$234 million, or two percent of outstanding interest-only residential mortgages that had entered the amortization period were accruing past due 30 days or more compared to \$1.3 billion, or one percent for the entire residential mortgage portfolio. In addition, at June 30, 2017, \$459 million, or four percent of outstanding interest-only residential mortgage loans that had entered the amortization period were nonperforming, of which \$242 million were contractually current, compared to \$2.6 billion,

or two percent for the entire residential mortgage portfolio, of which \$857 million were contractually current. Loans that have yet to enter the amortization period in our interest-only residential mortgage portfolio are primarily well-collateralized loans to our wealth management clients and have an interest-only period of three to ten years. More than 80 percent of these loans that have yet to enter the amortization period will not be required to make a fully-amortizing payment until 2020 or later.

Table 27 presents outstandings, nonperforming loans and net charge-offs by certain state concentrations for the residential mortgage portfolio. The Los Angeles-Long Beach-Santa Ana Metropolitan Statistical Area (MSA) within California represented 16 percent and 15 percent of outstandings at June 30, 2017 and December 31, 2016. In the New York area, the New York-Northern New Jersey-Long Island MSA made up 12 percent of outstandings at both June 30, 2017 and December 31, 2016.

Table 27 Residential Mortgage State Concentrations

	Outstandings <sup>(1)</sup>		Nonperforming <sup>(1)</sup>		Net Charge-offs <sup>(2)</sup>			
	June 30 2017	December 31 2016	June 30 2017	December 31 2016	Three Months Ended June 30 2017	Three Months Ended June 30 2016	Six Months Ended June 30 2017	Six Months Ended June 30 2016
(Dollars in millions)								
California	\$63,046	\$ 58,295	\$458	\$ 554	\$(21)	\$(7)	\$(25)	\$(30)
New York <sup>(3)</sup>	16,064	14,476	250	290	1	4	(1)	18
Florida <sup>(3)</sup>	10,545	10,213	280	322	(3)	2	(2)	17
Texas	6,953	6,607	116	132	—	2	1	8
Massachusetts	5,174	5,344	66	77	—	1	—	4
Other U.S./Non-U.S.	59,925	58,006	1,409	1,681	4	32	25	108
Residential mortgage loans <sup>(4)</sup>	\$162,107	\$ 152,941	\$2,579	\$ 3,056	\$(19)	\$34	\$(2)	\$125
Fully-insured loan portfolio	26,065	28,729						
Purchased credit-impaired residential mortgage	9,274	10,127						

loan  
portfolio  
(5)

Total  
residential  
mortgage \$ 197,446 \$ 191,797

loan  
portfolio

(1) Outstandings and nonperforming loans exclude loans accounted for under the fair value option.

(2) Net charge-offs exclude \$41 million and \$50 million of write-offs in the residential mortgage PCI loan portfolio for the three and six months ended June 30, 2017 compared to \$37 million and \$76 million for the same periods in 2016. For more information on PCI write-offs, see Consumer Portfolio Credit Risk Management – Purchased Credit-impaired Loan Portfolio on page 45.

(3) In these states, foreclosure requires a court order following a legal proceeding (judicial states).

(4) Amounts exclude the PCI residential mortgage and fully-insured loan portfolios.

(5) At June 30, 2017 and December 31, 2016, 47 percent and 48 percent of PCI residential mortgage loans were in California. There were no other significant single state concentrations.

#### Home Equity

At June 30, 2017, the home equity portfolio made up 14 percent of the consumer portfolio and is comprised of home equity lines of credit (HELOCs), home equity loans and reverse mortgages.

At June 30, 2017, our HELOC portfolio had an outstanding balance of \$54.7 billion, or 88 percent of the total home equity portfolio compared to \$58.6 billion, also 88 percent, at December 31, 2016. HELOCs generally have an initial draw period of 10 years and the borrowers typically are only required to pay the interest due on the loans on a monthly basis. After the initial draw period ends, the loans generally convert to 15-year amortizing loans.

At June 30, 2017, our home equity loan portfolio had an outstanding balance of \$5.1 billion, or eight percent of the total home equity portfolio compared to \$5.9 billion, or nine percent, at December 31, 2016. Home equity loans are almost all fixed-rate loans with amortizing payment terms of 10 to 30 years and of the \$5.1 billion at June 30, 2017, 57 percent have 25- to 30-year terms. At June 30, 2017, our reverse mortgage portfolio had an outstanding balance, excluding loans accounted for under the fair value option, of \$2.1 billion, or four percent of the total home equity portfolio compared to \$1.9 billion, or three percent, at December 31, 2016. We no longer originate reverse mortgages.

At June 30, 2017, approximately 68 percent of the home equity portfolio was in Consumer Banking, 25 percent was in All Other and the remainder of the portfolio was primarily in GWIM. Outstanding balances in the home equity portfolio, excluding loans accounted for under the fair value option, decreased \$4.5 billion during the six months ended June 30, 2017 primarily due to paydowns and charge-offs outpacing new originations and draws on existing lines. Of the total home equity portfolio at June 30, 2017 and December 31, 2016, \$19.2 billion and \$19.6 billion, or 31 percent and 29 percent, were in first-lien positions (33 percent and 31 percent excluding the PCI home equity portfolio). At June 30, 2017, outstanding balances in the home equity portfolio that were in a second-lien or more junior-lien position and where we also held the first-lien loan totaled \$10.2 billion, or 17 percent of our total home equity portfolio excluding the PCI loan portfolio.

Unused HELOCs totaled \$45.8 billion at June 30, 2017 compared to \$47.2 billion at December 31, 2016. The decrease was primarily due to accounts reaching the end of their draw period, which automatically eliminates open line exposure, and customers choosing to close accounts. Both of these more than offset the impact of new production. The HELOC utilization rate was 54

percent at June 30, 2017 compared to 55 percent at December 31, 2016.

Table 28 presents certain home equity portfolio key credit statistics on both a reported basis excluding loans accounted for under the fair value option, and excluding the PCI loan portfolio and loans accounted for under the fair value option. Additionally, in the “Reported Basis” columns in the table below, accruing

balances past due 30 days or more and nonperforming loans do not include the PCI loan portfolio, in accordance with our accounting policies, even though the customer may be contractually past due. As such, the following discussion presents the home equity portfolio excluding the PCI loan portfolio and loans accounted for under the fair value option. For more information on the PCI loan portfolio, see page 45.

Table 28 Home Equity – Key Credit Statistics

(Dollars in millions)	Reported Basis <sup>(1)</sup>		Excluding Purchased Credit-impaired Loans	
	June 30 2017	December 31 2016	June 30 2017	December 31 2016
Outstandings	\$61,942	\$ 66,443	\$58,772	\$ 62,832
Accruing past due 30 days or more <sup>(2)</sup>	496	566	496	566
Nonperforming loans <sup>(2)</sup>	2,681	2,918	2,681	2,918
Percent of portfolio				
Refreshed CLTV greater than 90 but less than or equal to 100	4	% 5	% 4	% 4
Refreshed CLTV greater than 100	7	8	6	7
Refreshed FICO below 620	7	7	6	6
2006 and 2007 vintages <sup>(3)</sup>	33	37	30	34

Net charge-off ratio <sup>(4)</sup>	Reported Basis				Excluding Purchased Credit-impaired				
	Three Months Ended		Six Months Ended		Three Months Ended		Six Months Ended		
	June 30 2017	June 30 2016	June 30 2017	June 30 2016	June 30 2017	June 30 2016	June 30 2017	June 30 2016	
	0.32%	0.70%	0.36%	0.65%	0.34	% 0.74	% 0.38	% 0.69	%

(1) Outstandings, accruing past due, nonperforming loans and percentages of the portfolio exclude loans accounted for under the fair value option.

(2) Accruing past due 30 days or more includes \$65 million and \$81 million and nonperforming loans include \$324 million and \$340 million of loans where we serviced the underlying first-lien at June 30, 2017 and December 31,

2016.

(3) These vintages of loans have higher refreshed combined LTV ratios and accounted for 52 percent and 50 percent of nonperforming home equity loans at June 30, 2017 and December 31, 2016, and 92 percent and 90 percent of net charge-offs for the three and six months ended June 30, 2017 and 44 percent and 42 percent for the same periods in 2016.

(4) Net charge-off ratios are calculated as annualized net charge-offs divided by average outstanding loans excluding loans accounted for under the fair value option.

Nonperforming outstanding balances in the home equity portfolio decreased \$237 million during the six months ended June 30, 2017 as outflows, including \$66 million of net transfers to held-for-sale and \$20 million of sales outpaced new inflows. Of the nonperforming home equity portfolio at June 30, 2017, \$1.4 billion, or 53 percent, were current on contractual payments. Nonperforming loans that are contractually current primarily consist of collateral-dependent TDRs, including those that have been discharged in Chapter 7 bankruptcy, junior-lien loans where the underlying first-lien is 90 days or more past due, as well as loans that have not yet demonstrated a sustained period of payment performance following a TDR. In addition, \$771 million, or 29 percent of nonperforming home equity loans, were 180 days or more past due and had been written down to the estimated fair value of the collateral, less costs to sell.

Accruing loans that were 30 days or more past due decreased \$70 million during the six months ended June 30, 2017, primarily due to continued portfolio improvement and a consumer real estate servicer conversion that occurred during the fourth quarter of 2016.

In some cases, the junior-lien home equity outstanding balance that we hold is performing, but the underlying first-lien is not. For outstanding balances in the home equity portfolio on which we service the first-lien loan, we are able to track whether the first-lien loan is in default. For loans where the first-lien is serviced by a third party, we utilize credit bureau data to estimate the delinquency status of the first-lien. Given that the credit bureau database we use does not include a property address for the mortgages, we are unable to identify with certainty whether a reported delinquent first-lien mortgage pertains to the same property for which we hold a junior-lien loan. For certain loans, we

utilize a third-party vendor to combine credit bureau and public record data to better link a junior-lien loan with the underlying first-lien mortgage. At June 30, 2017, we estimate that \$870 million of current and \$139 million of 30 to 89 days past due junior-lien loans were behind a delinquent first-lien loan. We service the first-lien loans on \$147 million of these combined amounts, with the remaining \$862 million serviced by third parties. Of the \$1.0 billion of current to 89 days past due junior-lien loans, based on available credit bureau data and our own internal servicing data, we estimate that approximately \$374 million had first-lien loans that were 90 days or more past due. Net charge-offs decreased \$76 million to \$50 million and decreased \$124 million to \$114 million for the three and six months ended June 30, 2017 compared to same periods in 2016. These decreases in net charge-offs were driven by favorable portfolio trends due in part to improvement in home prices and the U.S. economy.

Outstanding balances with refreshed combined loan-to-value (CLTV) greater than 100 percent comprised six percent and seven percent of the home equity portfolio at June 30, 2017 and December 31, 2016. Outstanding balances in the home equity portfolio with a refreshed CLTV greater than 100 percent reflect loans where our loan and available line of credit combined with any outstanding senior liens against the property are equal to or greater than the most recent valuation of the property securing the loan. Depending on the value of the property, there may be collateral in excess of the first-lien that is available to reduce the severity of loss on the second-lien. Of those outstanding balances with a refreshed CLTV greater than 100 percent, 95 percent of the customers were current on their home equity loan and 91 percent



of second-lien loans with a refreshed CLTV greater than 100 percent were current on both their second-lien and underlying first-lien loans at June 30, 2017.

Of the \$58.8 billion in total home equity portfolio outstandings at June 30, 2017, as shown in Table 29, 40 percent require interest-only payments. The outstanding balance of HELOCs that have entered the amortization period was \$16.9 billion at June 30, 2017. The HELOCs that have entered the amortization period have experienced a higher percentage of early stage delinquencies and nonperforming status when compared to the HELOC portfolio as a whole. At June 30, 2017, \$309 million, or two percent of outstanding HELOCs that had entered the amortization period were accruing past due 30 days or more. In addition, at June 30, 2017, \$1.9 billion, or 11 percent of outstanding HELOCs that had entered the amortization period were nonperforming, of which \$998 million were contractually current. Loans in our HELOC portfolio generally have an initial draw period of 10 years and 10 percent of these loans will enter the amortization period in the remainder of 2017 and will be required to make fully-amortizing payments. We communicate to contractually current customers more than a year prior to the end of their draw period to inform them of the potential change to the payment structure before entering the amortization period, and provide payment options to customers prior to the end of the draw period.

Although we do not actively track how many of our home equity customers pay only the minimum amount due on their home equity loans and lines, we can infer some of this information through a review of our HELOC portfolio that we service and that is still in its revolving period (i.e., customers may draw on and repay their line of credit, but are generally only required to pay interest on a monthly basis). During the three months ended June 30, 2017, approximately 37 percent of these customers with an outstanding balance did not pay any principal on their HELOCs. Table 29 presents outstandings, nonperforming balances and net charge-offs by certain state concentrations for the home equity portfolio. In the New York area, the New York-Northern New Jersey-Long Island MSA made up 13 percent of the outstanding home equity portfolio at both June 30, 2017 and December 31, 2016. For the three and six months ended June 30, 2017, loans within this MSA contributed 29 percent and 24 percent of net charge-offs within the home equity portfolio compared to 18 percent and 16 percent of net charge-offs for the same periods in 2016. The Los Angeles-Long Beach-Santa Ana MSA within California made up 11 percent of the outstanding home equity portfolio at both June 30, 2017 and December 31, 2016. For the three and six months ended June 30, 2017, loans within this MSA contributed net recoveries of \$5 million and \$8 million within the home equity portfolio compared to a net recovery of \$1 million and a net charge-off of \$1 million for the same periods in 2016.

Table 29 Home Equity State Concentrations

	Outstandings <sup>(1)</sup>		Nonperforming <sup>(1)</sup>		Net Charge-offs <sup>(2)</sup>			
	June 30 2017	December 31 2016	June 30 2017	December 31 2016	Three Months Ended June 30 2017	2016	Six Months Ended June 30 2017	2016
(Dollars in millions)								
California	\$16,314	\$ 17,563	\$769	\$ 829	\$(8)	\$(1)	\$(15)	\$9
Florida <sup>(3)</sup>	6,745	7,319	399	442	10	24	21	41
New Jersey <sup>(3)</sup>	4,830	5,102	196	201	11	14	21	25
New York <sup>(3)</sup>	4,473	4,720	257	271	9	16	17	26
Massachusetts	2,036	3,078	94	100	1	5	2	8
Other U.S./Non-U.S.	23,474	25,050	966	1,075	27	68	68	129
	\$58,772	\$ 62,832	\$2,681	\$ 2,918	\$50	\$126	\$114	\$238

Home equity loans <sup>(4)</sup>		
Purchased credit-impaired home equity portfolio <sup>(5)</sup>	3,170	3,611
Total home equity loan portfolio	\$61,942	\$ 66,443

(1) Outstandings and nonperforming loans exclude loans accounted for under the fair value option.

(2) Net charge-offs exclude \$14 million and \$38 million of write-offs in the home equity PCI loan portfolio for the three and six months ended June 30, 2017 compared to \$45 million and \$111 million for the same periods in 2016.

For more information on PCI write-offs, see Consumer Portfolio Credit Risk Management – Purchased Credit-impaired Loan Portfolio on page 45.

(3) In these states, foreclosure requires a court order following a legal proceeding (judicial states).

(4) Amount excludes the PCI home equity portfolio.

(5) At June 30, 2017 and December 31, 2016, 28 percent and 29 percent of PCI home equity loans were in California. There were no other significant single state concentrations.

#### Purchased Credit-impaired Loan Portfolio

Loans acquired with evidence of credit quality deterioration since origination and for which it is probable at purchase that we will be unable to collect all contractually required payments are accounted for under the accounting standards for PCI loans. For more information on PCI loans, see Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements of

the Corporation's 2016 Annual Report on Form 10-K and Note 4 – Outstanding Loans and Leases to the Consolidated Financial Statements.

Table 30 presents the unpaid principal balance, carrying value, related valuation allowance and the net carrying value as a percentage of the unpaid principal balance for the PCI loan portfolio.

Table 30 Purchased Credit-impaired Loan Portfolio

June 30, 2017					
(Dollars in millions)	Unpaid Principal Balance	Gross Carrying Value	Related Valuation Allowance	Carrying Value Net of Valuation Allowance	Percent of Unpaid Principal Balance
Residential mortgage (1)	\$9,442	\$9,274	\$ 165	\$ 9,109	96.47 %
Home equity	3,239	3,170	210	2,960	91.39
Total purchased credit-impaired loan portfolio	\$12,681	\$12,444	\$ 375	\$ 12,069	95.17

December 31, 2016					
(Dollars in millions)	Unpaid Principal Balance	Gross Carrying Value	Related Valuation Allowance	Carrying Value Net of Valuation Allowance	Percent of Unpaid Principal Balance
Residential mortgage (1)	\$10,330	\$10,127	\$ 169	\$ 9,958	96.40 %
Home equity	3,689	3,611	250	3,361	91.11
Total purchased credit-impaired loan portfolio	\$14,019	\$13,738	\$ 419	\$ 13,319	95.01

At June 30, 2017 and December 31, 2016, pay option loans had an unpaid principal balance of \$1.7 billion and \$1.9 billion and a carrying value of \$1.6 billion and \$1.8 billion. This includes \$1.4 billion and \$1.6 billion of loans (1) that were credit-impaired upon acquisition and \$161 million and \$226 million of loans that are 90 days or more past due at June 30, 2017 and December 31, 2016. The total unpaid principal balance of pay option loans with accumulated negative amortization was \$229 million and \$303 million, including \$12 million and \$16 million of negative amortization at June 30, 2017 and December 31, 2016.

The total PCI unpaid principal balance decreased \$1.3 billion, or 10 percent, during the six months ended June 30, 2017 primarily driven by payoffs, paydowns and write-offs. During the six months ended June 30, 2017, we sold PCI loans with a carrying value of \$204 million compared to sales of \$324 million for the same period in 2016.

Of the unpaid principal balance of \$12.7 billion at June 30, 2017, \$11.4 billion, or 90 percent, was current based on the contractual terms, \$739 million, or six percent, was in early stage delinquency, and \$432 million was 180 days or more past due, including \$367 million of first-lien mortgages and \$65 million of home equity loans.

The PCI residential mortgage loan portfolio represented 75 percent of the total PCI loan portfolio at June 30, 2017. Those loans to borrowers with a refreshed FICO score below 620 represented 25 percent of the PCI residential mortgage loan portfolio at June 30, 2017. Loans with a refreshed LTV greater than 90 percent, after consideration of purchase accounting adjustments and the related valuation allowance, represented 20 percent of the PCI residential mortgage loan portfolio and 23 percent based on the unpaid principal balance at June 30, 2017.

The PCI home equity portfolio represented 25 percent of the total PCI loan portfolio at June 30, 2017. Those loans with a refreshed FICO score below 620 represented 16 percent of the PCI home equity portfolio at June 30, 2017. Loans with a refreshed

CLTV greater than 90 percent, after consideration of purchase accounting adjustments and the related valuation allowance, represented 43 percent of the PCI home equity portfolio and 46 percent based on the unpaid principal balance at June 30, 2017.

#### U.S. Credit Card

At June 30, 2017, 97 percent of the U.S. credit card portfolio was managed in Consumer Banking with the remainder in GWIM. Outstandings in the U.S. credit card portfolio decreased \$1.5 billion during the six months ended June 30, 2017 due to paydowns and a seasonal decline in purchase volume. Net charge-offs increased \$67 million to \$640 million and \$86 million to \$1.2 billion for the three and six months ended June 30, 2017 compared to the same periods in 2016 due to portfolio seasoning and loan growth. U.S. credit card loans 30 days or more past due and still accruing interest decreased \$45 million and loans 90 days or more past due and still accruing interest decreased \$10 million during the six months ended June 30, 2017, driven by seasonal declines.

Unused lines of credit for U.S. credit card totaled \$328.9 billion and \$321.6 billion at June 30, 2017 and December 31, 2016. The increase was driven by a seasonal decrease in line utilization due to a decrease in transaction volume as well as account growth and lines of credit increases.

Table 31 presents certain state concentrations for the U.S. credit card portfolio.

Table 31 U.S. Credit Card State Concentrations

	Outstandings		Accruing Past Due 90 Days or More		Net Charge-offs			
	June 30 2017	December 31 2016	June 30 2017	December 31 2016	Three Months Ended June 30 2017	2016	Six Months Ended June 30 2017	2016
(Dollars in millions)					2017	2016	2017	2016
California	\$14,214	\$ 14,251	\$ 120	\$ 115	\$ 103	\$ 91	\$ 199	\$ 183
Florida	7,771	7,864	81	85	70	60	137	124
Texas	7,037	7,037	65	65	50	41	97	82
New York	5,607	5,683	73	60	51	41	96	81
Washington	1,104	4,128	16	18	14	15	28	29
Other U.S.	52,043	53,315	417	439	352	325	689	661
Total U.S. credit card portfolio	\$90,776	\$ 92,278	\$ 772	\$ 782	\$ 640	\$ 573	\$ 1,246	\$ 1,160

#### Non-U.S. Credit Card

On June 1, 2017, the Corporation completed the sale of its non-U.S. consumer credit card business. For more information on the sale, see Recent Events on page 3 and Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements.

Direct/Indirect Consumer

At June 30, 2017, approximately 54 percent of the direct/indirect portfolio was included in Consumer Banking (consumer auto and specialty lending – automotive, marine, aircraft, recreational vehicle loans and consumer personal loans) and 46 percent was included in GWIM (principally securities-based lending loans).

Outstandings in the direct/indirect portfolio decreased \$596 million during the six months ended June 30, 2017 primarily driven by lower draws and utilization in the securities-based lending portfolio.

Table 32 presents certain state concentrations for the direct/indirect consumer loan portfolio.

Table 32 Direct/Indirect State Concentrations

	Outstandings		Accruing Past		Net Charge-offs			
			Due		Three		Six	
	June 30	December 31	June 30	December 31	Months	Months	Months	Months
(Dollars in millions)	2017	2016	2017	2016	Ended	Ended	Ended	Ended
					June 30	June 30	2017	2016
					2017	2016	2017	2016
California	\$ 11,131	\$ 11,300	\$ 2	\$ 3	\$ 2	\$ 1	\$ 7	\$ 5
Florida	9,347	9,418	3	3	7	6	16	13
Texas	9,507	9,406	3	5	6	4	16	8
New York	5,143	5,253	1	1	—	—	1	1
Georgia	3,254	3,255	4	4	4	1	7	3
Other U.S./Non-U.S.	55,111	55,457	19	18	13	11	33	27
Total direct/indirect loan portfolio	\$ 93,493	\$ 94,089	\$ 32	\$ 34	\$ 32	\$ 23	\$ 80	\$ 57

Other Consumer

At June 30, 2017, approximately 78 percent of the \$2.7 billion other consumer portfolio was consumer auto leases included in Consumer Banking. The remainder is primarily associated with certain consumer finance businesses that we previously exited.

Nonperforming Consumer Loans, Leases and Foreclosed Properties Activity

Table 33 presents nonperforming consumer loans, leases and foreclosed properties activity for the three and six months ended June 30, 2017 and 2016. For more information on nonperforming loans, see Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K and Note 4 – Outstanding Loans and Leases to the Consolidated Financial Statements. During the six months ended June 30, 2017, nonperforming consumer loans declined \$722 million to \$5.3 billion driven in part by loan sales of \$261 million and net transfers of loans to held-for-sale of \$198 million. Additionally, nonperforming loans declined as outflows outpaced new inflows.

The outstanding balance of a real estate-secured loan that is in excess of the estimated property value less costs to sell is charged off no later than the end of the month in which the loan becomes 180 days past due unless repayment of the loan is fully insured. At June 30, 2017, \$2.1 billion, or 39 percent of nonperforming consumer real estate loans and foreclosed properties had been written down to their estimated property value less costs to sell, including \$1.9 billion of nonperforming loans 180 days or more past due and \$285 million of foreclosed properties. In addition, at June 30,

2017, \$2.3 billion, or 43 percent of nonperforming consumer loans were modified and are

now current after successful trial periods, or are current loans classified as nonperforming loans in accordance with applicable policies.

Foreclosed properties decreased \$78 million during the six months ended June 30, 2017 as liquidations outpaced additions. PCI loans are excluded from nonperforming loans as these loans were written down to fair value at the acquisition date; however, once we acquire the underlying real estate upon foreclosure of the delinquent PCI loan, it is included in foreclosed properties. Not included in foreclosed properties at June 30, 2017 was \$1.0 billion of real estate that was acquired upon foreclosure of certain delinquent government-guaranteed loans (principally FHA-insured loans). We exclude these amounts from our nonperforming loans and foreclosed properties activity as we expect we will be reimbursed once the property is conveyed to the guarantor for principal and, up to certain limits, costs incurred during the foreclosure process and interest incurred during the holding period.

Nonperforming loans also include certain loans that have been modified in TDRs where economic concessions have been granted to borrowers experiencing financial difficulties. These concessions typically result from our loss mitigation activities and could include reductions in the interest rate, payment extensions, forgiveness of principal, forbearance or other actions. Certain TDRs are classified as nonperforming at the time of restructuring and may only be returned to performing status after considering the borrower's sustained repayment performance for a reasonable period, generally six months. Nonperforming TDRs, excluding those modified loans in the PCI loan portfolio, are included in Table 33.

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Table 33 Nonperforming  
Consumer Loans,  
Leases and  
Foreclosed  
Properties Activity  
(1)

	Three Months Ended June 30		Six Months Ended June 30	
(Dollars in millions)	2017	2016	2017	2016
Nonperforming loans and leases, beginning of period	\$5,546	\$7,247	\$6,004	\$8,165
Additions	682	799	1,500	1,750
Reductions:				
Paydowns and payoffs	(170 )	(252 )	(400 )	(385 )
Sales	(119 )	(271 )	(261 )	(1,094 )
Returns to performing status (2)	(368 )	(396 )	(754 )	(837 )
Charge-offs	359 )	(334 )	(499 )	(729 )
Transfers to foreclosed properties	(53 )	(88 )	(110 )	(165 )
Transfers (to) / from	23	—	(198 )	—
loans held-for-sale				
Total net reductions to nonperforming loans and leases	(264 )	(542 )	(722 )	(1,460 )
Total nonperforming loans and leases, June	5,282	6,705	5,282	6,705

30 <sup>(3)</sup>

Total  
foreclosed  
properties 285      416      285      416  
June 30

<sup>(4)</sup>

Nonperforming  
consumer  
loans,  
leases  
and      \$5,567      \$7,121      \$5,567      \$7,121  
foreclosed

properties,  
June 30

Nonperforming  
consumer  
loans and  
leases as

a  
percentage 1.18      % 1.49      %

of  
outstanding  
consumer  
loans and  
leases <sup>(5)</sup>

Nonperforming  
consumer

loans,  
leases  
and  
foreclosed  
properties  
as a

percentage 1.24      1.58  
of

outstanding  
consumer  
loans,  
leases  
and  
foreclosed  
properties

<sup>(5)</sup>

Balances do not include nonperforming LHFS of \$4 million and \$20 million and nonaccruing TDRs removed from the PCI loan portfolio prior to January 1, 2010 of \$22 million and \$38 million at June 30, 2017 and 2016 as well as loans accruing past due 90 days or more as presented in Table 23 and Note 4 – Outstanding Loans and Leases to the Consolidated Financial Statements.

Consumer loans may be returned to performing status when all principal and interest is current and full repayment of the remaining contractual principal and interest is expected, or when the loan otherwise becomes well-secured and is in the process of collection.

<sup>(3)</sup> At June 30, 2017, 35 percent of nonperforming loans were 180 days or more past due.



(4) Foreclosed property balances do not include properties insured by certain government-guaranteed loans, principally FHA-insured loans, of \$1.0 billion and \$1.3 billion at June 30, 2017 and 2016.

(5) Outstanding consumer loans and leases exclude loans accounted for under the fair value option.

We classify junior-lien home equity loans as nonperforming when the first-lien loan becomes 90 days past due even if the junior-lien loan is performing. At June 30, 2017 and December 31, 2016, \$374 million and \$428 million of such junior-lien home

equity loans were included in nonperforming loans and leases.

Table 34 presents TDRs for the consumer real estate portfolio. Performing TDR balances are excluded from nonperforming loans and leases in Table 33.

Table 34 Consumer Real Estate Troubled Debt Restructurings

	June 30, 2017		December 31, 2016			
(Dollars in millions)	Total	Nonperforming	Performing	Total	Nonperforming	Performing
Residential mortgage (1, 2)	\$ 11,120	\$ 1,686	\$ 9,434	\$ 12,631	\$ 1,992	\$ 10,639
Home equity (3)	2,873	1,536	1,337	2,777	1,566	1,211
Total consumer real estate troubled debt restructurings	\$ 13,993	\$ 3,222	\$ 10,771	\$ 15,408	\$ 3,558	\$ 11,850

At June 30, 2017 and December 31, 2016, residential mortgage TDRs deemed collateral dependent totaled \$3.1 billion and \$3.5 billion, and included \$1.3 billion and \$1.6 billion of loans classified as nonperforming and \$1.8 billion and \$1.9 billion of loans classified as performing.

(1) Residential mortgage performing TDRs included \$4.4 billion and \$5.3 billion of loans that were fully-insured at June 30, 2017 and December 31, 2016.

Home equity TDRs deemed collateral dependent totaled \$1.7 billion and \$1.6 billion, and included \$1.3 billion of (3) loans classified as nonperforming for both periods, and \$353 million and \$301 million of loans classified as performing at June 30, 2017 and December 31, 2016, respectively.

In addition to modifying consumer real estate loans, we work with customers who are experiencing financial difficulty by modifying credit card and other consumer loans. Credit card and other consumer loan modifications generally involve a reduction in the customer's interest rate on the account and placing the customer on a fixed payment plan not exceeding 60 months, all of which are considered TDRs (the renegotiated TDR portfolio).

Modifications of credit card and other consumer loans are made through renegotiation programs utilizing direct customer contact, but may also utilize external renegotiation programs. The renegotiated TDR portfolio is excluded in large part from Table 33 as substantially all of the loans remain on accrual status until either charged off or paid in full. At June 30, 2017 and December 31, 2016, our renegotiated TDR portfolio was \$478 million and \$610 million, of which \$427 million and \$493 million were current or less than 30 days past due under the modified terms. The decline in the renegotiated TDR portfolio was primarily driven by paydowns and charge-offs as well as lower program enrollments. For more information on the renegotiated TDR portfolio, see Note

4 – Outstanding Loans and Leases to the Consolidated Financial Statements.  
Commercial Portfolio Credit Risk Management

Commercial credit risk is evaluated and managed with the goal that concentrations of credit exposure do not result in undesirable levels of risk. We review, measure and manage concentrations of credit exposure by industry, product, geography, customer relationship and loan size. We also review, measure and manage commercial real estate loans by geographic location and property type. In addition, within our non-U.S. portfolio, we evaluate exposures by region and by country. Tables 39, 42 and 47 summarize our concentrations. We also utilize syndications of exposure to third parties, loan sales, hedging and other risk mitigation techniques to manage the size and risk profile of the commercial credit portfolio. For more information on our industry concentrations, including our utilized exposure to the energy sector, which was three percent of total commercial utilized exposure at both June 30, 2017 and December 31, 2016, see

Commercial Portfolio Credit Risk Management – Industry Concentrations on page 53 and Table 42.

For more information on our accounting policies regarding delinquencies, nonperforming status and net charge-offs for the commercial portfolio, see Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.

#### Commercial Credit Portfolio

During the six months ended June 30, 2017, other than in the higher risk energy sub-sectors, credit quality among large corporate borrowers was strong. We saw further improvement in the energy sector in the six months ended June 30, 2017. Credit quality of commercial real estate borrowers continued to be strong with

conservative LTV ratios, stable market rents in most sectors and vacancy rates remaining low.

Outstanding commercial loans and leases increased \$10.8 billion during the six months ended June 30, 2017 primarily in U.S. commercial. Nonperforming commercial loans and leases decreased \$232 million to \$1.6 billion and reservable criticized balances decreased \$680 million to \$15.6 billion during the six months ended June 30, 2017 driven by improvements in the energy sector. The allowance for loan and lease losses for the commercial portfolio decreased \$78 million to \$5.2 billion at June 30, 2017 compared to December 31, 2016. For additional information, see Allowance for Credit Losses on page 57.

Table 35 presents our commercial loans and leases portfolio and related credit quality information at June 30, 2017 and December 31, 2016.

Table 35 Commercial Loans and Leases

	Outstandings		Nonperforming		Accruing Past Due 90 Days or More	
	June 30 2017	December 31 2016	June 30 2017	December 31 2016	June 30 2017	December 31 2016
(Dollars in millions)						
U.S. commercial	\$277,675	\$ 270,372	\$1,039	\$ 1,256	\$74	\$ 106
Commercial real estate <sup>(1)</sup>	59,177	57,355	123	72	—	7
Commercial lease financing	21,828	22,375	28	36	22	19
Non-U.S. commercial	90,786	89,397	269	279	—	5
	449,466	439,499	1,459	1,643	96	137
U.S. small business commercial <sup>(2)</sup>	13,560	12,993	61	60	68	71
Commercial loans excluding loans accounted for under the fair value option	463,026	452,492	1,520	1,703	164	208

Loans accounted for under the fair value option <sup>(3)</sup>	6,290	6,034	35	84	—	—
Total commercial loans and leases	\$469,316	\$ 458,526	\$ 1,555	\$ 1,787	\$ 164	\$ 208

(1) Includes U.S. commercial real estate loans of \$55.6 billion and \$54.3 billion and non-U.S. commercial real estate loans of \$3.6 billion and \$3.1 billion at June 30, 2017 and December 31, 2016.

(2) Includes card-related products.

(3) Commercial loans accounted for under the fair value option include U.S. commercial loans of \$3.2 billion and \$2.9 billion at June 30, 2017 and December 31, 2016 and includes \$3.1 billion of non-U.S. commercial loans for both periods. For more information on the fair value option, see Note 15 – Fair Value Option to the Consolidated Financial Statements.

Table 36 presents net charge-offs and related ratios for our commercial loans and leases for the three and six months ended June 30, 2017 and 2016. The decrease in net charge-offs of \$23 million for the six months ended June 30, 2017 compared to the same period in 2016 was primarily due to lower energy sector related losses.

Table 36 Commercial Net Charge-offs and Related Ratios

	Net Charge-offs				Net Charge-off Ratios <sup>(1)</sup>			
	Three Months Ended June 30		Six Months Ended June 30		Three Months Ended June 30		Six Months Ended June 30	
(Dollars in millions)	2017	2016	2017	2016	2017	2016	2017	2016
U.S. commercial	\$52	\$28	\$96	\$93	0.08%	0.04%	0.07%	0.07%
Commercial real estate	5	(2)	1	(8)	0.03	(0.01)	—	(0.03)
Commercial lease financing	1	15	1	13	0.01	0.30	0.01	0.13
Non-U.S. commercial	46	45	61	87	0.21	0.20	0.14	0.19
	104	86	159	185	0.09	0.08	0.07	0.09
U.S. small business commercial	53	50	105	102	1.60	1.55	1.60	1.59
Total commercial	\$157	\$136	\$264	\$287	0.14	0.12	0.12	0.13

(1) Net charge-off ratios are calculated as annualized net charge-offs divided by average outstanding loans and leases excluding loans accounted for under the fair value option.

Table 37 presents commercial credit exposure by type for utilized, unfunded and total binding committed credit exposure. Commercial utilized credit exposure includes standby letters of credit (SBLCs) and financial guarantees,

bankers' acceptances and commercial letters of credit that have been issued and for

which we are legally bound to advance funds under prescribed conditions during a specified time period and excludes exposure related to trading account assets. Although funds have not yet been advanced, these exposure types are considered utilized for credit risk management purposes.

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Total commercial utilized credit exposure increased \$8.5 billion during the six months ended June 30, 2017 primarily driven by increases in loans and leases. The utilization rate for loans and

leases, SBLCs and financial guarantees, commercial letters of credit and bankers acceptances, in the aggregate, was 59 percent and 58 percent at June 30, 2017 and December 31, 2016.

Table 37 Commercial Credit Exposure by Type

	Commercial Utilized <sup>(1)</sup>		Commercial Unfunded (2, 3, 4)		Total Commercial Committed	
	June 30 2017	December 31 2016	June 30 2017	December 31 2016	June 30 2017	December 31 2016
(Dollars in millions)						
Loans and leases <sup>(5)</sup>	\$475,266	\$ 464,260	\$358,009	\$ 366,106	\$833,275	\$ 830,366
Derivative assets <sup>(6)</sup>	39,190	42,512	—	—	39,190	42,512
Standby letters of credit and financial guarantees	34,810	33,135	686	660	35,496	33,795
Debt securities and other investments	27,217	26,244	4,395	5,474	31,612	31,718
Loans held-for-sale	4,602	6,510	1,343	3,824	5,945	10,334
Commercial letters of credit	1,553	1,464	95	112	1,648	1,576
Bankers' acceptances	335	395	—	13	335	408
Other	391	372	—	—	391	372
Total	\$583,364	\$ 574,892	\$364,528	\$ 376,189	\$947,892	\$ 951,081

Commercial utilized exposure includes loans of \$6.3 billion and \$6.0 billion and issued letters of credit with a

<sup>(1)</sup> notional amount of \$262 million and \$284 million accounted for under the fair value option at June 30, 2017 and December 31, 2016.

<sup>(2)</sup> Commercial unfunded exposure includes commitments accounted for under the fair value option with a notional amount of \$4.2 billion and \$6.7 billion at June 30, 2017 and December 31, 2016.

<sup>(3)</sup> Excludes unused business card lines which are not legally binding.

<sup>(4)</sup> Includes the notional amount of unfunded legally binding lending commitments net of amounts distributed (e.g., syndicated or participated) to other financial institutions. The distributed amounts were \$11.6 billion and \$12.1 billion at June 30, 2017 and December 31, 2016.

<sup>(5)</sup> Includes credit risk exposure associated with assets under operating lease arrangements of \$5.9 billion and \$5.7 billion at June 30, 2017 and December 31, 2016.

<sup>(6)</sup> Derivative assets are carried at fair value, reflect the effects of legally enforceable master netting agreements and have been reduced by cash collateral of \$34.6 billion and \$43.3 billion at June 30, 2017 and December 31, 2016. Not reflected in utilized and committed exposure is additional non-cash derivative collateral held of \$25.5 billion

and \$25.3 billion at June 30, 2017 and December 31, 2016, which consists primarily of other marketable securities. Table 38 presents commercial utilized reservable criticized exposure by loan type. Criticized exposure corresponds to the Special Mention, Substandard and Doubtful asset categories as defined by regulatory authorities. Total commercial utilized reservable criticized exposure decreased \$680 million, or four

percent, during the six months ended June 30, 2017 primarily driven by paydowns and net upgrades in the energy portfolio. Approximately 77 percent and 76 percent of commercial utilized reservable criticized exposure was secured at June 30, 2017 and December 31, 2016.

Table 38 Commercial Utilized Reservable Criticized Exposure

	June 30, 2017		December 31, 2016	
	Amount (1)	Percent (2)	Amount (1)	Percent (2)
(Dollars in millions)				
U.S. commercial	\$10,029	3.28 %	\$10,311	3.46 %
Commercial real estate	642	1.06	399	0.68
Commercial lease financing	725	3.32	810	3.62
Non-U.S. commercial	3,381	3.47	3,974	4.17
	14,777	3.04	15,494	3.27
U.S. small business commercial	863	6.36	826	6.36
Total commercial utilized reservable criticized exposure	\$15,640	3.13	\$16,320	3.35

Total commercial utilized reservable criticized exposure includes loans and leases of \$14.3 billion and \$14.9 billion at June 30, 2017 and December 31, 2016 and includes \$1.4 billion of commercial letters of credit for both periods.

(2) Percentages are calculated as commercial utilized reservable criticized exposure divided by total commercial utilized reservable exposure for each exposure category.

U.S. Commercial

At June 30, 2017, 71 percent of the U.S. commercial loan portfolio, excluding small business, was managed in Global Banking, 17 percent in Global Markets, 11 percent in GWIM (generally business-purpose loans for high net worth clients) and the remainder primarily in Consumer Banking. U.S. commercial loans, excluding loans accounted for under the fair value option, increased \$7.3 billion, or three percent, during the six months ended June 30, 2017 due to growth across most of the commercial businesses. Reservable criticized balances decreased \$282 million, or three percent, and nonperforming loans and leases decreased \$217 million, or 17 percent, in the six months ended June 30, 2017 driven by improvements in the energy sector. Net charge-offs increased \$24 million and \$3 million for the three and six months ended June 30, 2017 compared to the same periods in 2016. The three month increase was primarily

driven by a single energy client loss.

#### Commercial Real Estate

Commercial real estate primarily includes commercial loans and leases secured by non-owner-occupied real estate and is dependent on the sale or lease of the real estate as the primary source of repayment. The portfolio remains diversified across property types and geographic regions. California represented the largest state concentration at 24 percent and 23 percent of the commercial real estate loans and leases portfolio at June 30, 2017 and December 31, 2016. The commercial real estate portfolio is predominantly managed in Global Banking and consists of loans made primarily to public and private developers, and commercial real estate firms. Outstanding loans increased \$1.8 billion, or three percent, during the six months ended June 30, 2017 due to new originations outpacing paydowns. For the three and six months ended June 30, 2017, we continued to see low default rates and solid credit quality in both the residential and non-residential portfolios. We use a number of



proactive risk mitigation initiatives to reduce adversely rated exposure in the commercial real estate portfolio, including transfers of deteriorating exposures to management by independent special asset officers and the pursuit of loan restructurings or asset sales to achieve the best results for our customers and the Corporation. Nonperforming commercial real estate loans and foreclosed properties increased \$77 million, or 90 percent, driven by a small number of clients across property types. Reservable criticized

balances increased \$243 million, or 61 percent, during the six months ended June 30, 2017 primarily due to loan downgrades. Net charge-offs were \$5 million and \$1 million for the three and six months ended June 30, 2017 compared to net recoveries of \$2 million and \$8 million for the same periods in 2016. Table 39 presents outstanding commercial real estate loans by geographic region, based on the geographic location of the collateral, and by property type.

Outstanding  
Table 39 Commercial Real  
Estate Loans

(Dollars in millions)	June 30 2017	December 31 2016
By Geographic Region		
California	\$ 13,983	\$ 13,450
Northeast	9,835	10,329
Southwest	7,755	7,567
Southeast	5,650	5,630
Midwest	4,169	4,380
Florida	3,405	3,213
Midsouth	2,957	2,346
Northwest	2,723	2,430
Illinois	2,463	2,408
Non-U.S.	3,573	3,103
Other <sup>(1)</sup>	2,664	2,499
Total outstanding commercial real estate loans	\$ 59,177	\$ 57,355
By Property Type		
Non-residential		
Office	\$ 17,893	\$ 16,643
Shopping centers/retail	8,985	8,794
Multi-family rental	8,730	8,817
Hotels / Motels	5,810	5,550
	5,500	5,357

Industrial		
/		
Warehouse		
Multi-Use	2,806	2,822
Unsecured	2,094	1,730
Land and		
land	257	357
development		
Other	5,651	5,595
Total	57,726	55,665
non-residential		
Residential	1,451	1,690
Total		
outstanding		
commercial	\$159,177	\$ 57,355
real estate		
loans		

(1) Includes unsecured loans to real estate investment trusts and national home builders whose portfolios of properties span multiple geographic regions and properties in the states of Colorado, Utah, Hawaii, Wyoming and Montana. At June 30, 2017, total committed non-residential exposure was \$78.3 billion compared to \$76.9 billion at December 31, 2016, of which \$57.7 billion and \$55.7 billion were funded loans. Non-residential nonperforming loans and foreclosed properties increased \$77 million, or 95 percent, to \$158 million at June 30, 2017 compared to December 31, 2016 driven by a small number of clients across property types. The non-residential nonperforming loans and foreclosed properties represented 0.27 percent and 0.14 percent of total non-residential loans and foreclosed properties at June 30, 2017 and December 31, 2016. Non-residential utilized reservable criticized exposure increased \$229 million, or 58 percent, to \$626 million at June 30, 2017 compared to \$397 million at December 31, 2016, which represented 1.06 percent and 0.70 percent of non-residential utilized reservable exposure. For the non-residential portfolio, net charge-offs increased \$6 million to \$5 million and increased \$8 million to \$1 million for the three and six months ended June 30, 2017 compared to the same periods in 2016.

At June 30, 2017, total committed residential exposure was \$3.3 billion compared to \$3.7 billion at December 31, 2016, of which \$1.5 billion and \$1.7 billion were funded secured loans.

The nonperforming loans, leases and foreclosed properties and the utilized reservable criticized ratios for the residential portfolio were 0.32 percent and 1.09 percent at June 30, 2017 compared to 0.35 percent and 0.16 percent at December 31, 2016.

At June 30, 2017 and December 31, 2016, the commercial real estate loan portfolio included \$7.1 billion and \$6.8 billion of funded construction and land development loans that were originated to fund the construction and/or rehabilitation of commercial properties. Reservable criticized construction and land development loans totaled \$262 million and \$107 million, and nonperforming construction and land development loans and foreclosed properties totaled \$55 million and \$44 million at June 30, 2017 and December 31, 2016. During a property's construction phase, interest income is typically paid from interest reserves that are established at the inception of the loan. As construction is completed and the property is put into service, these interest reserves are depleted and interest payments from operating cash flows begin. We do not recognize interest income on nonperforming loans regardless of the existence of an interest reserve.

Non-U.S. Commercial

At June 30, 2017, 78 percent of the non-U.S. commercial loan portfolio was managed in Global Banking and 22 percent in Global Markets. Outstanding loans, excluding loans accounted for under the fair value option, increased \$1.4 billion during the six months ended June 30, 2017. Net charge-offs increased \$1 million to \$46 million and decreased \$26 million to \$61 million for the three and six months ended June 30, 2017 compared to the same periods in 2016. The six month decrease was primarily due to a decline in energy sector related losses. For more information on the non-U.S. commercial portfolio, see Non-U.S. Portfolio on page 56.

U.S. Small Business Commercial

The U.S. small business commercial loan portfolio is comprised of small business card loans and small business loans managed in Consumer Banking. Credit card-related products were 50 percent and 48 percent of the U.S. small business commercial portfolio at June 30, 2017 and December 31, 2016. Net charge-offs increased \$3 million to \$53 million and increased \$3 million to \$105 million and for the three and six months ended June 30, 2017 compared to the same periods in 2016. Of the U.S. small

business commercial net charge-offs, 89 percent and 88 percent were credit card-related products for the three and six months ended June 30, 2017 compared to 87 percent and 88 percent for the same periods in 2016.

Nonperforming Commercial Loans, Leases and Foreclosed Properties Activity

Table 40 presents the nonperforming commercial loans, leases and foreclosed properties activity during the three and six months ended June 30, 2017 and 2016. Nonperforming loans do not include loans accounted for under the fair value option. During the three and six months ended June 30, 2017, nonperforming commercial loans and leases decreased \$208 million and \$183 million to \$1.5 billion. Approximately 76 percent of commercial nonperforming loans, leases and foreclosed properties were secured and approximately 63 percent were contractually current. Commercial nonperforming loans were carried at approximately 86 percent of their unpaid principal balance before consideration of the allowance for loan and lease losses as the carrying value of these loans has been reduced to the estimated property value less costs to sell.

Table 40 Nonperforming Commercial Loans, Leases and Foreclosed Properties Activity (1, 2)

	Three Months Ended June 30		Six Months Ended June 30	
(Dollars in millions)	2017	2016	2017	2016
Nonperforming loans and leases, beginning of period	\$1,728	\$1,603	\$1,703	\$1,212
Additions	288	491	760	1,197
Reductions to nonperforming loans and leases:				

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Paydowns	(266 )	(211 )	(533 )	(331 )
Sales	(33 )	(87 )	(55 )	(93 )
Returns				
to performing status <sup>(3)</sup>	(86 )	(29 )	(140 )	(76 )
Charge-off	85 )	(106 )	(167 )	(248 )
Transfers to foreclosed properties <sup>(4)</sup>	(5 )	(2 )	(27 )	(2 )
Transfers to loans held-for-sale	(21 )	—	(21 )	—
Total net additions/(reductions) to nonperforming loans and leases	(208 )	56	(183 )	447
Total nonperforming loans and leases, June 30	1,520	1,659	1,520	1,659
Total foreclosed properties, June 30 <sup>(4)</sup>	40	19	40	19
Nonperforming commercial loans, leases and foreclosed properties, June 30	\$1,560	\$1,678	\$1,560	\$1,678
Nonperforming commercial loans and leases as a percentage of outstanding commercial loans and leases <sup>(5)</sup>	0.33 %	0.37 %		
	0.34	0.38		

Nonperforming  
commercial  
loans,  
leases  
and  
foreclosed  
properties  
as a  
percentage  
of  
outstanding  
commercial  
loans,  
leases  
and  
foreclosed  
properties <sup>(5)</sup>

- (1) Balances do not include nonperforming LHFS of \$264 million and \$203 million at June 30, 2017 and 2016.
- (2) Includes U.S. small business commercial activity. Small business card loans are excluded as they are not classified as nonperforming.  
Commercial loans and leases may be returned to performing status when all principal and interest is current and
- (3) full repayment of the remaining contractual principal and interest is expected, or when the loan otherwise becomes well-secured and is in the process of collection. TDRs are generally classified as performing after a sustained period of demonstrated payment performance.
- (4) New foreclosed properties represents transfers of nonperforming loans to foreclosed properties net of charge-offs recorded during the first 90 days after transfer of a loan to foreclosed properties.
- (5) Outstanding commercial loans exclude loans accounted for under the fair value option.

Table 41 presents our commercial TDRs by product type and performing status. U.S. small business commercial TDRs are comprised of renegotiated small business card loans and small business loans. The renegotiated small business card loans are not classified as nonperforming as they are charged off no later than the end of the month in which the loan becomes 180 days past due. For more information on TDRs, see Note 4 – Outstanding Loans and Leases to the Consolidated Financial Statements.

Table 41 Commercial Troubled Debt Restructurings

(Dollars in millions)	June 30, 2017			December 31, 2016		
	Total	Nonperforming	Performing	Total	Nonperforming	Performing
U.S. commercial	\$1,502	\$ 549	\$ 953	\$1,860	\$ 720	\$ 1,140
Commercial real estate	116	77	39	140	45	95
Commercial lease financing	7	5	2	4	2	2
Non-U.S. commercial	219	12	207	308	25	283
	1,844	643	1,201	2,312	792	1,520
U.S. small business commercial Total commercial troubled debt restructurings	18	4	14	15	2	13
	\$1,862	\$ 647	\$ 1,215	\$2,327	\$ 794	\$ 1,533

#### Industry Concentrations

Table 42 presents commercial committed and utilized credit exposure by industry and the total net credit default protection purchased to cover the funded and unfunded portions of certain credit exposures. Our commercial credit exposure is diversified across a broad range of industries. Total commercial committed exposure decreased \$3.2 billion, or less than one percent, during the six months ended June 30, 2017 to \$947.9 billion. The decrease in commercial committed exposure was concentrated in the Healthcare Equipment and Services sector and the Banking sector. Decreases were partially offset by higher exposure to the Retailing sector and the Food, Beverage and Tobacco sector.

Industry limits are used internally to manage industry concentrations and are based on committed exposure that is allocated on an industry-by-industry basis. A risk management framework is in place to set and approve industry limits as well as to provide ongoing monitoring. The Management Risk Committee oversees industry limit governance.

Diversified Financials, our largest industry concentration, with committed exposure of \$126.3 billion, increased \$1.7 billion, or one percent, during the six months ended June 30, 2017. The

increase primarily reflected an increase in exposure to several counterparties.

Real estate, our second largest industry concentration with committed exposure of \$85.1 billion, increased \$1.5 billion, or two percent, during the six months ended June 30, 2017. For more information on the commercial real estate and related portfolios, see Commercial Portfolio Credit Risk Management – Commercial Real Estate on page 50.

Retailing committed exposure increased \$5.9 billion, or nine percent, to \$74.4 billion during the six months ended June 30, 2017. The increase in committed exposure occurred primarily in the Internet and Catalog retail sector. Our energy-related committed exposure decreased \$2.4 billion, or six percent, to \$36.9 billion during the six months ended June 30, 2017. Energy sector net charge-offs were \$26 million during the six months ended June 30, 2017 compared to \$181 million for the same period in 2016. Energy sector reservable criticized exposure decreased \$1.2 billion to \$4.4 billion during the six months ended June 30, 2017 due to improvement in credit quality of some borrowers coupled with exposure reductions and fewer new criticized exposures. The energy allowance for credit losses decreased \$115 million to \$810 million during the six months ended June 30, 2017.

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Table 42 Commercial Credit Exposure by Industry <sup>(1)</sup>

(Dollars in millions)	Commercial Utilized		Total Commercial Committed <sup>(2)</sup>	
	June 30 2017	December 31 2016	June 30 2017	December 31 2016
Diversified financials	\$80,979	\$ 81,156	\$ 126,267	\$ 124,535
Real estate <sup>(3)</sup>	63,480	61,203	85,115	83,658
Retailing	42,841	41,630	74,396	68,507
Capital goods	34,373	34,278	66,302	64,202
Healthcare equipment and services	36,749	37,656	56,365	64,663
Government and public education	46,057	45,694	54,695	54,626
Materials	22,964	22,578	45,851	44,357
Banking	38,117	39,877	42,675	47,799
Food, beverage and tobacco	22,211	19,669	42,421	37,145
Consumer services	27,061	27,413	42,383	42,523
Energy	17,044	19,686	36,878	39,231
Commercial services and supplies	21,336	21,241	34,137	35,360
Transportation	20,917	19,805	28,886	27,483
Utilities	12,176	11,349	27,273	27,140
Media	13,195	13,419	24,911	27,116
Individuals and trusts	17,619	16,364	22,971	21,764
Pharmaceuticals and biotechnology	5,670	5,539	18,936	18,910
Software and services	9,164	7,991	18,361	19,790
Technology, hardware and	7,846	7,793	18,092	18,429



equipment				
Telecommunication services	6,237	6,317	14,535	16,925
Consumer durables and apparel	6,400	6,042	12,161	11,460
Insurance, including monolines	6,049	7,406	11,938	13,936
Automobiles and components	5,391	5,459	11,546	12,969
Food and staples retailing	4,771	4,795	9,265	8,869
Religious and social organizations	4,259	4,423	6,071	6,252
Other	10,458	6,109	15,461	13,432
Total commercial credit exposure by industry	\$583,364	\$ 574,892	\$947,892	\$ 951,081
Net credit default protection purchased on total commitments <sup>(4)</sup>			\$(1,875 )	\$(3,477 )

(1) Includes U.S. small business commercial exposure.

Includes the notional amount of unfunded legally binding lending commitments net of amounts distributed (e.g., syndicated or participated) to other financial institutions. The distributed amounts were \$11.6 billion and \$12.1 billion at June 30, 2017 and December 31, 2016.

Industries are viewed from a variety of perspectives to best isolate the perceived risks. For purposes of this table, the real estate industry is defined based on the borrowers' or counterparties' primary business activity using operating cash flows and primary source of repayment as key factors.

(4) Represents net notional credit protection purchased. For additional information, see Commercial Portfolio Credit Risk Management – Risk Mitigation below.

#### Risk Mitigation

We purchase credit protection to cover the funded portion as well as the unfunded portion of certain credit exposures. To lower the cost of obtaining our desired credit protection levels, we may add credit exposure within an industry, borrower or counterparty group by selling protection.

At June 30, 2017 and December 31, 2016, net notional credit default protection purchased in our credit derivatives portfolio to hedge our funded and unfunded exposures for which we elected the fair value option, as well as certain other credit exposures, was \$1.9 billion and \$3.5 billion. We recorded net losses of \$16 million and \$47 million for the three and six months ended June 30, 2017 compared to net losses of \$125 million and \$328 million for the same periods in 2016 on these positions. The gains and losses on these instruments were offset by gains and losses on the related exposures. The Value-at-Risk (VaR) results for these

exposures are included in the fair value option portfolio information in Table 50. For additional information, see Trading Risk Management on page 60.

Tables 43 and 44 present the maturity profiles and the credit exposure debt ratings of the net credit default protection portfolio at June 30, 2017 and December 31, 2016.

Table 43 Net Credit Default Protection by Maturity

	June 30 2017	December 31 2016
Less than or equal to one year	38 %	56 %
Greater than one year and less than or equal to five years	60	41
Greater than five years	2	3
Total net credit default protection	100 %	100 %

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Table 44 Net Credit Default Protection by  
Credit Exposure Debt Rating

	June 30, 2017		December 31, 2016	
(Dollars in millions) Ratings (2, 3)	Net Notional (1)	Percent of Total	Net Notional (1)	Percent of Total
A	\$(115 )	6.1 %	\$(135 )	3.9 %
BBB	(585 )	31.2	(1,884 )	54.2
BB	(644 )	34.3	(871 )	25.1
B	(465 )	24.8	(477 )	13.7
CCC and below	(52 )	2.8	(81 )	2.3
NR (4)	(14 )	0.8	(29 )	0.8
Total net credit default protection	\$(1,875 )	100.0%	\$(3,477 )	100.0%

(1) Represents net credit default protection purchased.

(2) Ratings are refreshed on a quarterly basis.

(3) Ratings of BBB- or higher are considered to meet the definition of investment grade.

(4) NR is comprised of index positions held and any names that have not been rated.

In addition to our net notional credit default protection purchased to cover the funded and unfunded portion of certain credit exposures, credit derivatives are used for market-making activities for clients and establishing positions intended to profit from directional or relative value changes. We execute the majority of our credit derivative trades in the OTC market with large, multinational financial institutions, including broker-dealers and, to a lesser degree, with a variety of other investors. Because these

transactions are executed in the OTC market, we are subject to settlement risk. We are also subject to credit risk in the event that these counterparties fail to perform under the terms of these contracts. In most cases, credit derivative transactions are executed on a daily margin basis. Therefore, events such as a credit downgrade, depending on the ultimate rating level, or a breach of credit covenants would typically require an increase in the amount of collateral required by the counterparty, where applicable, and/or allow us to take additional protective measures such as early termination of all trades.

Table 45 presents the total contract/notional amount of credit derivatives outstanding and includes both purchased and written credit derivatives. The credit risk amounts are measured as net asset exposure by counterparty, taking into consideration all contracts with the counterparty. For more information on our written credit derivatives, see Note 2 – Derivatives to the Consolidated Financial Statements.

The credit risk amounts discussed above and presented in Table 45 take into consideration the effects of legally enforceable master netting agreements while amounts disclosed in Note 2 – Derivatives to the Consolidated Financial Statements are shown on a gross basis. Credit risk reflects the potential benefit from offsetting exposure to non-credit derivative products with the same counterparties that may be netted upon the occurrence of certain events, thereby reducing our overall exposure.

Table 45 Credit Derivatives

	June 30, 2017		December 31, 2016	
(Dollars in millions)	Contract/ Notional	Credit Risk	Contract/ Notional	Credit Risk
Purchased credit derivatives:				
Credit default swaps	\$531,117	\$2,528	\$603,979	\$2,732
Total return swaps/other	33,670	226	21,165	433
Total purchased credit derivatives	\$564,787	\$2,754	\$625,144	\$3,165
Written credit derivatives:				
Credit default swaps	\$521,589	n/a	\$614,355	n/a
Total return swaps/other	37,761	n/a	25,354	n/a
Total written credit derivatives	\$559,350	n/a	\$639,709	n/a

n/a = not applicable

#### Counterparty Credit Risk Valuation Adjustments

We record counterparty credit risk valuation adjustments on certain derivative assets, including our credit default protection purchased, in order to properly reflect the credit risk of the counterparty, as presented in Table 46. We calculate CVA based on a modeled expected exposure that incorporates current market risk factors including changes in market spreads and non-credit related market factors that affect the value of a derivative. The exposure also takes into consideration credit mitigants such as legally enforceable master netting agreements and collateral. For additional information, see Note 2 – Derivatives to the Consolidated Financial Statements.

We enter into risk management activities to offset market driven exposures. We often hedge the counterparty spread risk in CVA with credit default swaps (CDS). We hedge other market risks in CVA primarily with currency and interest rate swaps. In certain instances, the net-of-hedge amounts in the following table move

in the same direction as the gross amount or may move in the opposite direction. This movement is a consequence of the complex interaction of the risks being hedged, resulting in limitations in the ability to perfectly hedge all of the market exposures at all times.

Table 46 Credit Valuation Gains and Losses

Three Months Ended June 30

Gains					
(Losses)	2017		2016		
(Dollars					
in	GrossHedge	Net	Gross	Hedge	Net
millions)					
Credit	\$97	\$(45 )	\$52	\$(26 )	\$ 59 \$ 33
valuation					

	Six Months Ended June 30					
	2017			2016		
	GrossHedge	Net	Gross	Hedge	Net	
Credit	\$258	\$(180)	\$78	\$(235)	\$ 320	\$ 85
valuation						

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## Non-U.S. Portfolio

Our non-U.S. credit and trading portfolios are subject to country risk. We define country risk as the risk of loss from unfavorable economic and political conditions, currency fluctuations, social instability and changes in government policies. A risk management framework is in place to measure, monitor and manage non-U.S. risk and exposures. In addition to the direct risk of doing business in a country, we also are exposed to indirect country risks (e.g., related to the collateral received on secured financing transactions or related to client clearing activities). These indirect exposures are managed in the normal course of business through credit, market and operational risk governance, rather than through country risk governance.

Table 47 presents our 20 largest non-U.S. country exposures as of June 30, 2017. These exposures accounted for 88 percent of our total non-U.S. exposure at both June 30, 2017 and December 31, 2016. Net country exposure for these 20 countries decreased \$4.2 billion in the six months ended June 30, 2017 primarily driven by decreases in the U.K., Switzerland, Japan, Italy and Brazil, partially offset by increases in the Netherlands, South Korea and Australia. On a product basis, the decrease was driven by the sale of the non-U.S. consumer credit card business, lower unfunded commitments in Switzerland, and lower funded commitments in Japan, Italy and Brazil. These reductions were

partially offset by higher funded commitments in the Netherlands and Australia, and increased securities exposure in South Korea.

Non-U.S. exposure is presented on an internal risk management basis and includes sovereign and non-sovereign credit exposure, securities and other investments issued by or domiciled in countries other than the U.S.

Funded loans and loan equivalents include loans, leases, and other extensions of credit and funds, including letters of credit and due from placements, which have not been reduced by collateral, hedges or credit default protection.

Unfunded commitments are the undrawn portion of legally binding commitments related to loans and loan equivalents.

Net counterparty exposure includes the fair value of derivatives, including the counterparty risk associated with CDS, and secured financing transactions.

Securities and other investments are carried at fair value and long securities exposures are netted against short exposures with the same underlying issuer to, but not below, zero (i.e., negative issuer exposures are reported as zero).

Net country exposure represents country exposure less hedges and credit default protection purchased, net of credit default protection sold. For more information on our non-U.S. credit and trading portfolios, see Non-U.S. Portfolio in the MD&A of the Corporation's 2016 Annual Report on Form 10-K.

Table 47 Top 20 Non-U.S. Countries Exposure

(Dollars in millions)	Funded Loans and Loan Equivalents	Unfunded Loan Commitments	Net Counterparty Exposure	Securities/ Other Investments	Country Exposure at June 30 2017	Hedges and Credit Default Protection	Net Country Exposure at June 30 2017	Increase (Decrease) from December 31 2016
United Kingdom	\$ 20,535	\$ 15,186	\$ 5,966	\$ 1,410	\$ 43,097	\$(4,527)	\$ 38,570	\$( 9,163)
Germany	13,077	7,930	1,877	3,709	26,593	(3,360)	23,233	855
Canada	7,685	7,637	2,485	1,990	19,797	(817)	18,980	206
Japan	9,599	558	2,030	3,207	15,394	(1,751)	13,643	(1,368)
Brazil	8,217	363	1,254	2,924	12,758	(324)	12,434	(1,232)
France	4,516	5,603	2,230	4,618	16,967	(4,842)	12,125	1,431
China	10,153	833	490	949	12,425	(387)	12,038	1,153
Australia	5,664	2,922	453	1,782	10,821	(388)	10,433	1,510
India	5,915	211	374	3,840	10,340	(856)	9,484	256
Netherlands	4,591	3,600	718	2,322	11,231	(1,802)	9,429	2,031
	7,136	144	605	765	8,650	(53)	8,597	1,118

Hong Kong									
South Korea	4,861	496	1,052	2,159	8,568	(553 )	8,015	1,909	
Singapore	2,885	352	1,112	2,264	6,613	(74 )	6,539	1,121	
Mexico	3,716	1,364	230	896	6,206	(432 )	5,774	1,290	
Switzerland	1,168	3,422	277	154	7,021	(1,532 )	5,489	(4,157 )	
Italy	1,289	1,317	515	886	4,007	(1,176 )	2,831	(1,256 )	
Spain	1,650	996	290	863	3,799	(1,026 )	2,773	227	
Turkey	2,621	50	32	73	2,776	(207 )	2,569	(121 )	
Belgium	1,031	688	119	796	2,634	(242 )	2,392	466	
United Arab Emirates	1,968	111	284	2	2,365	(93 )	2,272	(471 )	
Total top 20 non-U.S. countries exposure	\$ 120,277	\$ 53,783	\$ 22,393	\$ 35,609	\$ 232,062	\$(24,442 )	\$ 207,620	\$ (4,195 )	

A number of economic conditions and geopolitical events have given rise to risk aversion in certain emerging markets. Our two largest emerging market country exposures at June 30, 2017 were Brazil and China. At June 30, 2017, net exposure to Brazil was \$12.4 billion, concentrated in sovereign securities, oil and gas companies and commercial banks. At June 30, 2017, net exposure to China was \$12.0 billion, concentrated in large state-owned companies, subsidiaries of multinational corporations and commercial banks.

The outlook for policy direction and therefore economic performance in the EU remains uncertain as a consequence of reduced political cohesion among EU countries. In addition, the results of the accelerated elections in the U.K. in June 2017 have increased uncertainty on the U.K.'s ability to negotiate its exit from the EU in a favorable manner. Our largest EU country exposure at June 30, 2017 was the U.K. At June 30, 2017, net exposure to the U.K. was \$38.6 billion, concentrated in multinational corporations and sovereign clients. For additional information, see

Executive Summary – Second Quarter 2017 Economic and Business Environment on page 3.

#### Provision for Credit Losses

The provision for credit losses decreased \$250 million to \$726 million, and \$412 million to \$1.6 billion for the three and six months ended June 30, 2017 compared to the same periods in 2016. The provision for credit losses was \$182 million and \$281 million lower than net charge-offs for the three and six months ended June 30, 2017, resulting in a reduction in the allowance for credit losses. This compared to a reduction of \$9 million and \$80 million in the allowance for credit losses for the three and six months ended June 30, 2016.

The provision for credit losses for the consumer portfolio decreased \$127 million to \$606 million, and increased \$243 million to \$1.4 billion for the three and six months ended June 30, 2017 compared to the same periods in 2016. The decrease for the three-month period was primarily driven by improvement in the home equity and residential mortgage portfolios due to increased home prices and lower nonperforming loans. The increase for the six-month period was primarily due to portfolio seasoning and loan growth in the U.S. credit card portfolio. Included in the provision is a benefit of \$24 million and an expense of \$44 million related to the PCI loan portfolio for the three and six months ended June 30, 2017 compared to a benefit of \$12 million and \$89 million for the same periods in 2016. The provision for credit losses for the commercial portfolio, including unfunded lending commitments, decreased \$123 million to \$120 million, and \$655 million to \$183 million for the three and six months ended June 30, 2017 compared to the same periods in 2016 driven by reductions in energy exposures.

#### Allowance for Credit Losses

##### Allowance for Loan and Lease Losses

The allowance for loan and lease losses is comprised of two components. The first component covers nonperforming commercial loans and TDRs. The second component covers loans and leases on which there are incurred losses that are not yet individually identifiable, as well as incurred losses that may not be represented in the loss forecast models. We evaluate the adequacy of the allowance for loan and lease losses based on the total of these two components. The allowance for loan and lease losses excludes LHFS and loans accounted for under the fair value option as the fair value reflects a credit risk component. For more information on the allowance for loan and lease losses, see Allowance for Credit Losses in the MD&A of the Corporation's 2016 Annual Report on Form 10-K.

During the three and six months ended June 30, 2017, the factors that impacted the allowance for loan and lease losses included improvements in the credit quality of the consumer real estate portfolios driven by continuing improvements in the U.S. economy and labor markets, proactive credit risk management initiatives and the impact of high credit quality originations. Evidencing the improvements in the U.S. economy and labor markets are downward unemployment trends and increases in home prices. In addition to these improvements, in the consumer

portfolio, nonperforming consumer loans decreased \$722 million in the six months ended June 30, 2017 as returns to performing status, charge-offs, paydowns and loan sales continued to outpace new nonaccrual loans. During the six months ended June 30, 2017, the allowance for loan and lease losses in the commercial portfolio reflected decreased energy reserves primarily driven by reductions in energy exposures.

The allowance for loan and lease losses for the consumer portfolio, as presented in Table 49, was \$5.7 billion at June 30, 2017, a decrease of \$527 million from December 31, 2016. The decrease was primarily in the home equity portfolio and the non-U.S. card portfolio which was sold on June 1, 2017, partially offset by an increase in the U.S. credit card portfolio. The reductions in the home equity portfolio were due to improved home prices, lower nonperforming loans and a decrease in loan balances. The increase in the U.S. credit card portfolio was driven by portfolio seasoning and loan growth.

The allowance for loan and lease losses for the commercial portfolio, as presented in Table 49, was \$5.2 billion at June 30, 2017, a decrease of \$78 million from December 31, 2016 driven by decreased energy reserves due to reductions in the higher risk energy sub-sectors. Commercial utilized reservable criticized exposure decreased to \$15.6 billion at June 30, 2017 from \$16.3 billion (to 3.13 percent from 3.35 percent of total commercial utilized reservable exposure) at December 31, 2016, largely due to net upgrades and paydowns in the energy portfolio. Nonperforming commercial loans decreased to \$1.5 billion at June 30, 2017 from \$1.7 billion (to 0.33 percent from 0.38 percent of outstanding commercial loans excluding loans accounted for under the fair value option) at December 31, 2016. See Tables 35, 36 and 38 for additional details on key commercial credit statistics.



The allowance for loan and lease losses as a percentage of total loans and leases outstanding was 1.20 percent at June 30, 2017 compared to 1.26 percent at December 31, 2016. The June 30, 2017 and December 31, 2016 ratios above include the PCI loan portfolio. Excluding the PCI loan portfolio, the allowance for loan and lease losses as a percentage of total loans and leases outstanding was 1.17 percent and 1.24 percent at June 30, 2017 and December 31, 2016.

#### Reserve for Unfunded Lending Commitments

In addition to the allowance for loan and lease losses, we also estimate probable losses related to unfunded lending commitments such as letters of credit, financial guarantees, unfunded bankers' acceptances and binding loan commitments, excluding commitments accounted for under the fair value option. For more information on the reserve for unfunded lending commitments, see Allowance for Credit Losses in the MD&A of the Corporation's 2016 Annual Report on Form 10-K.

The reserve for unfunded lending commitments was \$757 million at June 30, 2017, a decrease of \$5 million from December 31, 2016.

Table 48 presents a rollforward of the allowance for credit losses, which includes the allowance for loan and lease losses and the reserve for unfunded lending commitments, for the three and six months ended June 30, 2017 and 2016.

Table 48 Allowance for Credit Losses

(Dollars in millions)	Three Months		Six Months Ended	
	Ended June 30		June 30	
	2017	2016	2017	2016
Allowance for loan and lease losses, beginning of period	\$11,112	\$12,069	\$11,237	\$12,234
Loans and leases charged off				
Residential mortgage	(45 )	(88 )	(106 )	(273 )
Home equity	(153 )	(216 )	(296 )	(409 )
U.S. credit card	(753 )	(680 )	(1,471 )	(1,373 )
Non-U.S. credit card <sup>(1)</sup>	(44 )	(63 )	(103 )	(124 )
Direct/Indirect consumer	(107 )	(88 )	(221 )	(189 )
Other consumer	(50 )	(53 )	(105 )	(110 )
Total consumer charge-offs	(1,152 )	(1,188 )	(2,302 )	(2,478 )
U.S. commercial <sup>(2)</sup>	(141 )	(124 )	(278 )	(282 )
Commercial real estate	(8 )	(3 )	(8 )	(8 )
Commercial lease financing	(3 )	(17 )	(6 )	(17 )
Non-U.S. commercial	(46 )	(46 )	(66 )	(89 )
Total commercial charge-offs	(198 )	(190 )	(358 )	(396 )
Total loans and leases charged off	(1,350 )	(1,378 )	(2,660 )	(2,874 )
Recoveries of loans and leases previously charged off				
Residential mortgage	64	54	108	148
Home equity	103	90	182	171
U.S. credit card	113	107	225	213
Non-U.S. credit card	13	17	28	33
Direct/Indirect consumer	75	65	141	132
Other consumer	33	6	40	15
Total consumer recoveries	401	339	724	712
U.S. commercial <sup>(3)</sup>	36	46	77	87
Commercial real estate	3	5	7	16
Commercial lease financing	2	2	5	4
Non-U.S. commercial	—	1	5	2
Total commercial recoveries	41	54	94	109
Total recoveries of loans and leases previously charged off	442	393	818	821
Net charge-offs	(908 )	(985 )	(1,842 )	(2,053 )
Write-offs of PCI loans	(55 )	(82 )	(88 )	(187 )
Provision for loan and lease losses	726	952	1,566	1,968
Other <sup>(4)</sup>	—	(117 )	2	(125 )
Allowance for loan and lease losses, June 30	10,875	11,837	10,875	11,837
Reserve for unfunded lending commitments, beginning of period	757	627	762	646
Provision for unfunded lending commitments	—	24	(5 )	5
Other <sup>(4)</sup>	—	99	—	99
	757	750	757	750

Reserve for unfunded lending  
commitments, June 30

Allowance for credit losses, June 30 \$11,632 \$12,587 \$11,632 \$12,587

- (1) Represents net charge-offs of non-U.S. credit card loans, which were previously included in assets of business held for sale. On June 1, 2017, the Corporation completed the sale of its non-U.S. consumer credit card business.
- (2) Includes U.S. small business commercial charge-offs of \$64 million and \$128 million for the three and six months ended June 30, 2017 compared to \$61 million and \$123 million for the same periods in 2016.
- (3) Includes U.S. small business commercial recoveries of \$11 million and \$23 million for the three and six months ended June 30, 2017 compared to \$11 million and \$21 million for the same periods in 2016.
- (4) Primarily represents the net impact of portfolio sales, consolidations and deconsolidations, foreign currency translation adjustments and certain other reclassifications.

Table 48 Allowance for Credit Losses (continued)

(Dollars in millions)	Three Months Ended		Six Months Ended June		
	June 30 2017	2016	30 2017	2016	
Loan and allowance ratios:					
Loans and leases outstanding at June 30 <sup>(5)</sup>	\$909,341	\$894,493	\$909,341	\$894,493	
Allowance for loan and lease losses as a percentage of total loans and leases outstanding at June 30 <sup>(5)</sup>	1.20	% 1.32	% 1.20	% 1.32	%
Consumer allowance for loan and lease losses as a percentage of total consumer loans and leases outstanding at June 30 <sup>(6)</sup>	1.28	1.45	1.28	1.45	
Commercial allowance for loan and lease losses as a percentage of total commercial loans and leases outstanding at June 30 <sup>(7)</sup>	1.12	1.19	1.12	1.19	
Average loans and leases outstanding <sup>(5)</sup>	\$907,421	\$890,603	\$907,005	\$888,130	
Annualized net charge-offs as a percentage of average loans and leases outstanding <sup>(5, 8)</sup>	0.40	% 0.44	% 0.41	% 0.46	%
Annualized net charge-offs and PCI write-offs as a percentage of average loans and leases outstanding <sup>(5)</sup>	0.43	0.48	0.43	0.51	
Allowance for loan and lease losses as a percentage of total nonperforming loans and leases at June 30 <sup>(5, 9)</sup>	160	142	160	142	
Ratio of the allowance for loan and lease losses at June 30 to annualized net charge-offs <sup>(8)</sup>	2.99	2.99	2.93	2.87	
Ratio of the allowance for loan and lease losses at June 30 to annualized net charge-offs and PCI write-offs	2.82	2.76	2.79	2.63	
Amounts included in allowance for loan and lease losses for loans and leases that are excluded from nonperforming loans and leases at June 30 <sup>(10)</sup>	\$3,782	\$4,087	\$3,782	\$4,087	
Allowance for loan and lease losses as a percentage of total nonperforming loans and leases, excluding the allowance for loan and lease losses for loans and leases that are excluded from nonperforming loans and leases at June 30 <sup>(5, 10)</sup>	104	% 93	% 104	% 93	%
Loan and allowance ratios excluding PCI loans and the related valuation allowance: <sup>(11)</sup>					
Allowance for loan and lease losses as a percentage of total loans and leases outstanding at June 30 <sup>(5)</sup>	1.17	% 1.29	% 1.17	% 1.29	%
Consumer allowance for loan and lease losses as a percentage of total consumer loans and leases outstanding at June 30 <sup>(6)</sup>	1.23	1.38	1.23	1.38	
Annualized net charge-offs as a percentage of average loans and leases outstanding <sup>(5)</sup>	0.41	0.45	0.42	0.47	
	154	135	154	135	

Allowance for loan and lease losses as a percentage of total nonperforming loans and leases at June 30 <sup>(5, 9)</sup>

Ratio of the allowance for loan and lease losses at June 30 to annualized net charge-offs 2.88 2.85 2.83 2.74

(5) Outstanding loan and lease balances and ratios do not include loans accounted for under the fair value option of \$7.3 billion and \$8.7 billion at June 30, 2017 and 2016. Average loans accounted for under the fair value option were \$7.3 billion and \$7.4 billion for the three and six months ended June 30, 2017 compared to \$9.1 billion and \$8.2 billion for the same periods in 2016.

(6) Excludes consumer loans accounted for under the fair value option of \$1.0 billion and \$1.8 billion at June 30, 2017 and 2016.

(7) Excludes commercial loans accounted for under the fair value option of \$6.3 billion and \$6.8 billion at June 30, 2017 and 2016.

(8) Net charge-offs exclude \$55 million and \$88 million of write-offs in the PCI loan portfolio for the three and six months ended June 30, 2017 compared to \$82 million and \$187 million for the same periods in 2016. For more information on PCI write-offs, see Consumer Portfolio Credit Risk Management – Purchased Credit-impaired Loan Portfolio on page 45.

(9) For more information on our definition of nonperforming loans, see pages 47 and 52.

(10) Primarily includes amounts allocated to U.S. credit card and unsecured consumer lending portfolios in Consumer Banking, PCI loans and the non-U.S. credit card portfolio in All Other.

(11) For more information on the PCI loan portfolio and the valuation allowance for PCI loans, see Note 4 – Outstanding Loans and Leases and Note 5 – Allowance for Credit Losses to the Consolidated Financial Statements.

For reporting purposes, we allocate the allowance for credit losses across products as presented in Table 49.

Table 49 Allocation of the Allowance for Credit Losses  
by Product Type

	June 30, 2017			December 31, 2016				
	(Dollars in millions)	Amount	Percent of Total	Percent of Loans and Leases Outstanding <sup>(1)</sup>	Amount	Percent of Total	Percent of Loans and Leases Outstanding <sup>(1)</sup>	
Allowance for loan and lease losses								
Residential mortgage	\$901	8.28	% 0.46	%	\$1,012	8.82	% 0.53	%
Home equity	1,408	12.95	2.27		1,738	15.14	2.62	
U.S. credit card	3,063	28.17	3.37		2,934	25.56	3.18	
Non-U.S. credit card	—	—	—		243	2.12	2.64	
Direct/Indirect consumer	273	2.51	0.29		244	2.13	0.26	
Other consumer	50	0.46	1.84		51	0.44	2.01	
Total consumer	5,695	52.37	1.28		6,222	54.21	1.36	
U.S. commercial <sup>(2)</sup>	3,250	29.89	1.12		3,326	28.97	1.17	
Commercial real estate	949	8.73	1.60		920	8.01	1.60	
Commercial lease financing	151	1.38	0.69		138	1.20	0.62	
Non-U.S. commercial	830	7.63	0.91		874	7.61	0.98	
Total commercial <sup>(3)</sup>	5,180	47.63	1.12		5,258	45.79	1.16	
Allowance for loan and lease losses <sup>(4)</sup>	10,875	100.00%	1.20		11,480	100.00%	1.26	
Less: Allowance included in assets	—				(243)			

of business held for sale <sup>(5)</sup> Total allowance for loan 10,875 and lease losses Reserve for unfunded 757 lending commitments Allowance for credit \$ 11,632 losses	11,237
	762
	\$ 11,999

Ratios are calculated as allowance for loan and lease losses as a percentage of loans and leases outstanding excluding loans accounted for under the fair value option. Consumer loans accounted for under the fair value option included residential mortgage loans of \$666 million and \$710 million and home equity loans of \$369 million and \$341 million at June 30, 2017 and December 31, 2016. Commercial loans accounted for under the fair value option included U.S. commercial loans of \$3.2 billion and \$2.9 billion at June 30, 2017 and December 31, 2016 and includes non-U.S. commercial loans of \$3.1 billion for both periods.

(1) Includes allowance for loan and lease losses for U.S. small business commercial loans of \$417 million and \$416 million at June 30, 2017 and December 31, 2016.

(2) Includes allowance for loan and lease losses for impaired commercial loans of \$242 million and \$273 million at June 30, 2017 and December 31, 2016.

(3) Includes \$375 million and \$419 million of valuation allowance presented with the allowance for loan and lease losses related to PCI loans at June 30, 2017 and December 31, 2016.

(4) Represents allowance for loan and lease losses related to the non-U.S. credit card loan portfolio, which was included in assets of business held for sale on the Consolidated Balance Sheet at December 31, 2016. On June 1, 2017, the Corporation completed the sale of its non-U.S. consumer credit card business.

#### Market Risk Management

For more information on our market risk management process, see Market Risk Management in the MD&A of the Corporation's 2016 Annual Report on Form 10-K.

#### Trading Risk Management

To evaluate risk arising from trading activities, the Corporation focuses on the actual and potential volatility of revenues generated by individual positions as well as portfolios of positions.

VaR is a common statistic used to measure market risk as it allows the aggregation of market risk factors, including the effects of portfolio diversification. A VaR model simulates the value of a portfolio under a range of scenarios in order to generate a distribution of potential gains and losses. VaR represents the loss a portfolio is not expected to exceed more than a certain number of times per period, based on a specified holding period, confidence level and window of historical data. We use one VaR model consistently across the trading portfolios and it uses a historical simulation approach based on a three-year window of historical data. Our primary VaR statistic is equivalent to a 99 percent confidence level. This means that for a VaR with a one-day holding period, there should not be losses in excess of VaR, on average, 99 out of 100 trading days. For more information on our trading risk management process, see Trading Risk Management in the MD&A of the Corporation's 2016 Annual Report on Form 10-K.

Table 50 presents the total market-based trading portfolio VaR which is the combination of the covered positions trading portfolio and the impact from less liquid trading exposures. Covered positions are defined by regulatory standards as trading assets

and liabilities, both on- and off-balance sheet, that meet a defined set of specifications. These specifications identify the most liquid trading positions which are intended to be held for a short-term horizon and where we are able to hedge the material risk elements in a two-way market. Positions in less liquid markets, or where there are restrictions on the ability to trade the positions, typically do not qualify as covered positions. Foreign exchange and commodity positions are always considered covered positions, except for structural foreign currency positions that are excluded with prior regulatory approval. In addition, Table 50 presents our fair value option portfolio, which includes substantially all of the funded and unfunded exposures for which we elect the fair value option, and their corresponding hedges. The fair value option portfolio combined with the total market-based trading portfolio VaR represents our total market-based portfolio VaR. Additionally, market risk VaR for trading activities as presented in Table 50 differs from VaR used for regulatory capital calculations due to the holding period being used. The holding period for VaR used for regulatory capital calculations is 10 days, while for the market risk VaR presented below it is one day. Both measures utilize the same process and methodology.

The total market-based portfolio VaR results in Table 50 include market risk to which we are exposed from all business segments, excluding CVA and DVA. The majority of this portfolio is within the Global Markets segment. Table 50 presents period-end, average, high and low daily trading VaR for the three months ended June 30, 2017, March 31, 2017 and June 30, 2016, as well as average daily trading VaR for the six months ended June 30, 2017 and 2016, using a 99 percent confidence level.



Table 50 Market Risk VaR for Trading Activities

(Dollars in millions)	Three Months Ended June 30, 2017			March 31, 2017			June 30, 2016			Six Months Ended June 30	
	Period End	Average	High <sup>(1)</sup> Low <sup>(1)</sup>	Period End	Average	High <sup>(1)</sup> Low <sup>(1)</sup>	Period End	Average	High <sup>(1)</sup> Low <sup>(1)</sup>	2017 Average	2016 Average
Foreign exchange	\$11	\$ 13	\$ 25 \$ 3	\$23	\$ 12	\$ 23 \$ 5	\$7	\$ 9	\$ 11 \$ 7	\$13	\$ 10
Interest rate	18	23	33 15	28	17	28 11	22	20	28 15	20	22
Credit Equity	26	25	29 22	26	26	29 22	28	31	34 27	26	31
Commodity	19	18	26 13	24	19	30 14	21	20	30 12	19	20
Portfolio diversification	6	6	9 4	6	4	7 3	8	6	8 4	5	6
Total covered positions trading portfolio	(45 )	(47 )	— —	(58 )	(45 )	— —	(42 )	(46 )	— —	(47 )	(49 )
Impact from less liquid exposures	35	38	53 26	49	33	49 25	44	40	49 30	36	40
Total market-based trading portfolio	3	5	— —	10	5	— —	4	6	— —	5	4
Fair value option loans	38	43	60 32	59	38	59 28	48	46	58 35	41	44
Fair value option hedges	9	10	12 9	11	12	14 11	21	25	29 21	11	30
Fair value option portfolio diversification	6	5	7 4	6	6	7 5	11	12	15 10	6	15
Total fair value option portfolio diversification	(6 )	(6 )	— —	(7 )	(8 )	— —	(20 )	(23 )	— —	(7 )	(30 )
Portfolio diversification	9	9	11 8	10	10	11 9	12	14	17 12	10	15
Total	(5 )	(4 )	— —	(6 )	(4 )	— —	(3 )	(6 )	— —	(5 )	(7 )

Total  
 market-based trading portfolio

\$42	\$ 48	66	36	\$63	\$ 44	63	32	\$57	\$ 54	70	44	\$46	\$ 52
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The high and low for each portfolio may have occurred on different trading days than the high and low for the (1) components. Therefore the impact from less liquid exposures and the amount of portfolio diversification, which is the difference between the total portfolio and the sum of the individual components, are not relevant.

The average total market-based trading portfolio VaR decreased slightly for the three months ended June 30, 2017 compared to the same period in 2016 primarily due to reduced exposure to the credit markets. The graph below presents the daily total market-based trading portfolio VaR for the previous five quarters, corresponding to the data in Table 50.

Additional VaR statistics produced within our single VaR model are provided in Table 51 at the same level of detail as in Table 50. Evaluating VaR with additional statistics allows for an increased understanding of the risks in the portfolio as the historical market data used in the VaR calculation does not necessarily follow a predefined statistical distribution. Table 51 presents average trading VaR statistics at 99 percent and 95 percent confidence levels for the three months ended June 30, 2017, March 31, 2017 and June 30, 2016.

Average Market Risk VaR for Trading  
Table 51 Activities – 99 percent and 95 percent VaR  
Statistics

	Three Months Ended					
	June 30, 2017		March 31, 2017		June 30, 2016	
(Dollars in millions)	99 percent	95 percent	99 percent	95 percent	99 percent	95 percent
Foreign exchange	\$13	\$7	\$12	\$8	\$9	\$5
Interest rate	23	16	17	11	20	12
Credit	25	15	26	14	31	19
Equity	18	9	19	10	20	13
Commodity	6	4	4	3	6	3
Portfolio diversification	(47)	(30)	(45)	(28)	(46)	(31)
Total covered positions trading portfolio	38	21	33	18	40	21
Impact from less liquid exposures	5	2	5	3	6	3
Total market-based trading portfolio	43	23	38	21	46	24
Fair value option loans	10	6	12	7	25	14
Fair value option hedges	5	4	6	4	12	8
Fair value option portfolio diversification	(6)	(5)	(8)	(5)	(23)	(14)
Total fair value option portfolio	9	5	10	6	14	8
Portfolio diversification	(4)	(3)	(4)	(4)	(6)	(5)
	\$48	\$25	\$44	\$23	\$54	\$27

Total  
market-based  
portfolio

Backtesting

The accuracy of the VaR methodology is evaluated by backtesting, which compares the daily VaR results, utilizing a one-day holding period, against a comparable subset of trading revenue. A backtesting excess occurs when a trading loss exceeds the VaR for the corresponding day. These excesses are evaluated to understand the positions and market moves that produced the trading loss and to ensure that the VaR methodology accurately represents those losses. For more information on our backtesting process, see Trading Risk Management – Backtesting in the MD&A of the Corporation's 2016 Annual Report on Form 10-K.

During the three and six months ended June 30, 2017, there were no days in which there was a backtesting excess for our total market-based portfolio VaR, utilizing a one-day holding period.

Total Trading-related Revenue

Total trading-related revenue, excluding brokerage fees, and CVA, DVA and funding valuation adjustment (FVA) gains (losses), represents the total amount earned from trading positions, including market-based net interest income, which are taken in a diverse range of financial instruments and markets. Trading

account assets and liabilities are reported at fair value. For more information on fair value, see Note 14 – Fair Value Measurements to the Consolidated Financial Statements. Trading-related revenue can be volatile and is largely driven by general market conditions and customer demand. Also, trading-related revenue is dependent on the volume and type of transactions, the level of risk assumed, and the volatility of price and rate movements at any given time within the ever-changing market environment. Significant daily revenue by business is monitored and the primary drivers of these are reviewed.

The following histogram is a graphic depiction of trading volatility and illustrates the daily level of trading-related revenue for the three months ended June 30, 2017 compared to the three months ended March 31, 2017. During the three months ended June 30, 2017, positive trading-related revenue was recorded for 100 percent of the trading days, of which 80 percent were daily trading gains of over \$25 million. This compares to the three months ended March 31, 2017, where positive trading-related revenue was recorded for all of the trading days, of which 89 percent were daily trading gains of over \$25 million.

### Trading Portfolio Stress Testing

Because the very nature of a VaR model suggests results can exceed our estimates and it is dependent on a limited historical window, we also stress test our portfolio using scenario analysis. This analysis estimates the change in the value of our trading portfolio that may result from abnormal market movements. For additional information, see Trading Risk Management – Trading Portfolio Stress Testing in the MD&A of the Corporation's 2016 Annual Report on Form 10-K.

### Interest Rate Risk Management for the Banking Book

The following discussion presents net interest income for banking book activities.

Interest rate risk represents the most significant market risk exposure to our banking book balance sheet. Interest rate risk is measured as the potential change in net interest income caused by movements in market interest rates.

Client-facing activities, primarily lending and deposit-taking, create interest rate sensitive positions on our balance sheet.

We prepare forward-looking forecasts of net interest income. The baseline forecast takes into consideration expected future business growth, ALM positioning and the direction of interest rate movements as implied by the market-based forward curve. We then measure and evaluate the impact that alternative interest rate scenarios have on the baseline forecast in order to assess interest rate sensitivity under varied conditions. The net interest income forecast is frequently updated for changing assumptions and differing outlooks based on economic trends, market conditions and business strategies. Thus, we continually monitor our balance sheet position in order to maintain an acceptable level of exposure to interest rate changes.

The interest rate scenarios that we analyze incorporate balance sheet assumptions such as loan and deposit growth and pricing, changes in funding mix, product repricing, maturity characteristics

and investment securities premium amortization. Our overall goal is to manage interest rate risk so that movements in interest rates do not significantly adversely affect earnings and capital.

Table 52 presents the spot and 12-month forward rates used in our baseline forecasts at June 30, 2017 and December 31, 2016.

Table 52 Forward Rates

	June 30, 2017			
	Federal Funds	Three-month LIBOR	10-Year Swap	
Spot rates	1.25 %	1.30 %	2.28 %	
12-month forward rates	1.50	1.62	2.41	

	December 31, 2016			
	Federal Funds	Three-month LIBOR	10-Year Swap	
Spot rates	0.75 %	1.00 %	2.34 %	
12-month forward rates	1.25	1.51	2.49	

Table 53 shows the pre-tax dollar impact to forecasted net interest income over the next 12 months from June 30, 2017 and December 31, 2016, resulting from instantaneous parallel and non-parallel shocks to the market-based forward curve. Periodically we evaluate the scenarios presented so that they are meaningful in the context of the current rate environment.

In the six months ended June 30, 2017, the asset sensitivity of our balance sheet to rising rates was largely unchanged. We continue to be asset sensitive to a parallel move in interest rates with the majority of that benefit coming from the short end of the yield curve. Additionally, higher interest rates impact the fair value of debt securities and, accordingly, for debt securities classified as available-for-sale (AFS), may adversely affect accumulated OCI and thus capital levels under the Basel 3 capital rules. Under instantaneous upward parallel shifts, the near-term adverse impact to Basel 3 capital is reduced over time by offsetting positive



impacts to net interest income. For more information on the transition provisions of Basel 3, see Capital Management – Regulatory Capital on page 29.

Table 53 Estimated Banking Book Net Interest Income Sensitivity

(Dollars in millions)	Short Rate (bps)	Long Rate (bps)	June 30 2017	December 31 2016
Curve Change				
Parallel Shifts				
+100 bps instantaneous shift	+100	+100	\$3,188	\$ 3,370
-50 bps instantaneous shift	-50	-50	(2,684)	(2,900)
Flatteners				
Short-end instantaneous change	+100	—	2,163	2,473
Long-end instantaneous change	-50	-50	(1,095)	(961)
Steeperers				
Short-end instantaneous change	-50	—	(1,558)	(1,918)
Long-end instantaneous change	+100	+100	1,049	928

The sensitivity analysis in Table 53 assumes that we take no action in response to these rate shocks and does not assume any change in other macroeconomic variables normally correlated with changes in interest rates. As part of our ALM activities, we use securities, certain residential mortgages, and interest rate and foreign exchange derivatives in managing interest rate sensitivity.

The behavior of our deposit portfolio in the baseline forecast and in alternate interest rate scenarios is a key assumption in our projected estimates of net interest income. The sensitivity analysis in Table 53 assumes no change in deposit portfolio size or mix from the baseline forecast in alternate rate environments. In higher rate scenarios, any customer activity resulting in the replacement

of low-cost or noninterest-bearing deposits with higher-yielding deposits or market-based funding would reduce our benefit in those scenarios.

#### Interest Rate and Foreign Exchange Derivative Contracts

Interest rate and foreign exchange derivative contracts are utilized in our ALM activities and serve as an efficient tool to manage our interest rate and foreign exchange risk. We use derivatives to hedge the variability in cash flows or changes in fair value on our balance sheet due to interest rate and foreign exchange components. For more information on our hedging activities, see Note 2 – Derivatives to the Consolidated Financial Statements.

Our interest rate contracts are generally non-leveraged generic interest rate and foreign exchange basis swaps, options, futures and forwards. In addition, we use foreign exchange contracts, including cross-currency interest rate swaps, foreign currency futures contracts, foreign currency forward contracts and options to mitigate the foreign exchange risk associated with foreign currency-denominated assets and liabilities.

Changes to the composition of our derivatives portfolio during the six months ended June 30, 2017 reflect actions taken for interest rate and foreign exchange rate risk management. The decisions to reposition our derivatives portfolio are based on the current assessment of economic and financial conditions including the interest rate and foreign currency environments, balance sheet composition and trends, and the relative mix of our cash and derivative positions.

Table 54 presents derivatives utilized in our ALM activities including those designated as accounting and economic hedging instruments and shows the notional amount, fair value, weighted-average receive-fixed and pay-fixed rates, expected maturity and average estimated durations of our open ALM derivatives at June 30, 2017 and December 31, 2016. These amounts do not include derivative hedges on our MSRs.



Table 54 Asset and Liability Management Interest Rate and Foreign Exchange Contracts

(Dollars in millions, average estimated duration in years)	Fair Value	June 30, 2017 Expected Maturity							Average Estimated Duration
		Total	Remainder of 2017	2018	2019	2020	2021	Thereafter	
Receive-fixed interest rate swaps <sup>(1)</sup>	\$3,864								5.31
Notional amount		\$147,830	\$12,956	\$21,850	\$21,783	\$9,515	\$5,307	\$76,419	
Weighted-average fixed-rate		2.59	% 3.43	% 3.20	% 1.87	% 1.98	% 3.18	% 2.51	%
Pay-fixed interest rate swaps <sup>(1)</sup>	(267 )								5.87
Notional amount		\$29,519	\$—	\$6,408	\$—	\$—	\$—	\$23,111	
Weighted-average fixed-rate		2.09	% —	% 1.60	% —	% —	% —	% 2.23	%
Same-currency basis swaps <sup>(2)</sup>	(23 )								
Notional amount		\$47,170	\$8,585	\$11,028	\$6,791	\$1,180	\$2,811	\$16,775	
Foreign exchange basis swaps <sup>(1, 3, 4)</sup>	(2,508 )								
Notional amount		117,946	11,143	23,493	11,872	12,946	9,206	49,286	
Option products <sup>(5)</sup>	30								
Notional amount <sup>(6)</sup>		1,805	1,790	—	—	—	—	15	
Foreign exchange contracts <sup>(1, 4, 7)</sup>	998								

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Notional amount (6)	18,187	165	2,271	2,126	(19 )	2,356	11,288		
Futures and forward rate contracts	—								
Notional amount (6)	308	308	—	—	—	—	—		
Net ALM contracts	\$2,094								
	December 31, 2016								
	Expected Maturity								
(Dollars in millions, average estimated duration in years)	Fair Value	Total	2017	2018	2019	2020	2021	Thereafter	Average Estimated Duration
Receive-fixed interest rate swaps (1)	\$4,055								4.81
Notional amount		\$118,603	\$21,453	\$25,788	\$10,283	\$7,515	\$5,307	\$48,257	
Weighted-average fixed-rate		2.83	% 3.64	% 2.81	% 2.31	% 2.07	% 3.18	% 2.67	%
Pay-fixed interest rate swaps (1)	159								2.77
Notional amount		\$22,400	\$1,527	\$9,168	\$2,072	\$7,975	\$213	\$1,445	
Weighted-average fixed-rate		1.37	% 1.84	% 1.47	% 0.97	% 1.08	% 1.00	% 2.45	%
Same-currency basis swaps (2)	(26 )								
Notional amount		\$59,274	\$20,775	\$11,027	\$6,784	\$1,180	\$2,799	\$16,709	
Foreign exchange basis swaps (1, 3, 4)	(4,233 )								
Notional amount		125,522	26,509	22,724	12,178	12,150	8,365	43,596	

Option products (5)								
Notional amount (6)	1,687	1,673	—	—	—	—	14	
Foreign exchange contracts (1, 4, 7)	3,180							
Notional amount (6)	(20,285 )	(30,199 )	197	1,961	(8 )	881	6,883	
Futures and forward rate contracts (19)								
Notional amount (6)	37,896	37,896	—	—	—	—	—	
Net ALM contracts	\$3,159							

Does not include basis adjustments on either fixed-rate debt issued by the Corporation or AFS debt securities, (1) which are hedged using derivatives designated as fair value hedging instruments, that substantially offset the fair values of these derivatives.

At June 30, 2017 and December 31, 2016, the notional amount of same-currency basis swaps included \$47.2 (2) billion and \$59.3 billion in both foreign currency and U.S. Dollar-denominated basis swaps in which both sides of the swap are in the same currency.

Foreign exchange basis swaps consisted of cross-currency variable interest rate swaps used separately or in (3) conjunction with receive-fixed interest rate swaps.

Does not include foreign currency translation adjustments on certain non-U.S. debt issued by the Corporation that (4) substantially offset the fair values of these derivatives.

The notional amount of option products of \$1.8 billion at June 30, 2017 was comprised of \$1.8 billion in foreign (5) exchange options and \$15 million in purchased caps/floors. Option products of \$1.7 billion at December 31, 2016 were comprised of \$1.7 billion in foreign exchange options and \$14 million in purchased caps/floors.

(6) Reflects the net of long and short positions. Amounts shown as negative reflect a net short position.

The notional amount of foreign exchange contracts of \$18.2 billion at June 30, 2017 was comprised of \$57.0 (7) billion in foreign currency-denominated and cross-currency receive-fixed swaps, \$(31.5) billion in net foreign currency forward rate contracts, \$(8.4) billion in foreign currency-denominated pay-fixed swaps and \$1.1 billion in net foreign currency futures contracts. Foreign exchange contracts of \$(20.3) billion at December 31, 2016 were comprised of \$21.5 billion in foreign currency-denominated and cross-currency receive-fixed swaps, \$(38.5) billion in net foreign currency forward rate contracts, \$(4.6) billion in foreign currency-denominated pay-fixed swaps and \$1.3 billion in foreign currency futures contracts.

We use interest rate derivative instruments to hedge the variability in the cash flows of our assets and liabilities and other forecasted transactions (collectively referred to as cash flow hedges). The net losses on both open and terminated cash flow hedge derivative instruments recorded in accumulated OCI were \$1.2 billion and \$1.4 billion, on a pre-tax basis, at June 30, 2017 and December 31, 2016. These net losses are expected to be reclassified into earnings in the same period as the hedged cash flows affect earnings and will decrease income or increase expense on the respective hedged cash flows. Assuming no change in open cash flow derivative hedge positions and no changes in prices or interest rates beyond what is implied in forward yield curves at June 30, 2017, the pre-tax net losses are expected to be reclassified into earnings as follows: \$226 million, or 18 percent within the next year, 52 percent in years two through five, and 18 percent in years six through 10, with the remaining 12 percent thereafter. For more information on derivatives designated as cash flow hedges, see Note 2 – Derivatives to the Consolidated Financial Statements. We hedge our net investment in non-U.S. operations determined to have functional currencies other than the U.S. Dollar using forward foreign exchange contracts that typically settle in less than 180 days, cross-currency basis swaps and foreign exchange options. We recorded net after-tax losses on derivatives in accumulated OCI associated with net investment hedges which were offset by gains on our net investments in consolidated non-U.S. entities at June 30, 2017.

#### Mortgage Banking Risk Management

We originate, fund and service mortgage loans, which subject us to credit, liquidity and interest rate risks, among others. We determine whether loans will be held-for-investment or held-for-sale at the time of commitment and manage credit and liquidity risks by selling or securitizing a portion of the loans we originate.

Interest rate risk and market risk can be substantial in the mortgage business. Changes in interest rates and other market factors impact the volume of mortgage originations. Changes in interest rates also impact the value of IRLCs and the related residential first mortgage LHFS between the date of the IRLC and the date the loans are sold to the secondary market. An increase in mortgage interest rates typically leads to a decrease in the value of these instruments. Conversely, the value of the MSRMs will increase driven by lower prepayment expectations when there is an increase in interest rates. Because the interest rate risks of these two hedged items offset, we combine them into one overall hedged item with one combined economic hedge portfolio consisting of derivative contracts and securities.

For the three and six months ended June 30, 2017, we recorded gains in mortgage banking income of \$41 million and \$66 million related to the change in fair value of the MSRMs, IRLCs and LHFS, net of gains and losses on the hedge portfolio, compared to gains of \$51 million and \$182 million for the same periods in 2016. For more information on MSRMs, see Note 14 – Fair Value Measurements to the Consolidated Financial Statements and for more information on mortgage banking income, see Consumer Banking on page 14.

#### Complex Accounting Estimates

Our significant accounting principles are essential in understanding the MD&A. Many of our significant accounting principles require complex judgments to estimate the values of assets and liabilities. We have procedures and processes in place to facilitate making these judgments. For additional information, see Complex Accounting Estimates of the MD&A of the Corporation's 2016 Annual Report on Form 10-K and Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.

#### Goodwill and Intangible Assets

The nature of and accounting for goodwill and intangible assets are discussed in the Corporation's 2016 Annual Report on Form 10-K in Note 1 - Summary of Significant Accounting Principles and Note 8 - Goodwill and Intangible Assets and Complex Accounting Estimates of the MD&A.

We completed our annual goodwill impairment test as of June 30, 2017 for all of our reporting units that had goodwill. In performing that test, we compared the fair value of each reporting unit to its estimated carrying value as measured by allocated equity, which includes goodwill. To determine fair value, we utilized a combination of valuation techniques, consistent with the market approach and the income approach, and also utilized independent valuation specialists.

Under the market approach we estimated the fair value of the individual reporting units utilizing various market multiples from comparable publicly-traded companies in industries similar to the reporting unit, including the application of a control premium of 30 percent, based upon observed comparable premiums paid for change-in-control transactions for financial institutions.

Under the income approach, we estimated the fair value of the individual reporting units based on the net present value of estimated future cash flows, utilizing internal forecasts, and an appropriate terminal value. Discount rates used ranged from 8.9 to 13.3 percent and were derived from a capital asset pricing model (i.e., cost of equity financing), that we believe adequately reflects the risk and uncertainty specifically in our internally-developed forecasts, the financial markets generally and industries similar to each of the reporting units. Cumulative average growth rates developed by management for revenues and expenses in each reporting unit ranged from flat (or zero percent) to positive 5.1 percent.

Based on the results of the test, we determined that the fair value exceeded the carrying value for all reporting units that had goodwill, indicating there was no impairment. A prolonged decrease in a particular assumption could eventually lead to the fair value of a reporting unit being less than its carrying value. Table 55 presents goodwill assigned to the individual reporting units and the respective fair value as a percentage of the carrying value as of June 30, 2017.

Table 55 Goodwill by Reporting Unit

(Dollars in millions)	June 30, 2017	
	Estimated Fair Value as a Percent of Carrying Value	Goodwill
Consumer Banking		
Deposits	265.7%	\$ 18,414
Consumer Lending	183.6	11,709
Global Wealth & Investment Management		
U.S. Trust	148.9	2,917
Merrill Lynch Global Wealth Management	237.2	6,764
Global Banking		
Global Commercial Banking	170.1	16,146
Global Corporate and Investment Banking	218.1	6,231
Business Banking	172.8	1,546
Global Markets	168.4	5,197
Non-GAAP Reconciliations		

Tables 56 and 57 provide reconciliations of certain non-GAAP financial measures to GAAP financial measures.

Table 56 Quarterly and Year-to-Date Supplemental Financial Data and Reconciliations to GAAP Financial Measures

(Dollars in millions)	Three Months Ended June 30 2017			2016		
	As Reported	Fully taxable-equivalent adjustment	Fully taxable-equivalent basis	As Reported	Fully taxable-equivalent adjustment	Fully taxable-equivalent basis
Net interest income	\$10,986	\$ 237	\$ 11,223	\$10,118	\$ 223	\$ 10,341
Total revenue, net of interest expense	22,829	237	23,066	21,286	223	21,509
Income tax expense	3,108	237	3,345	2,034	223	2,257

	Six Months Ended June 30 2017		2016			
Net interest income	\$22,044	\$ 434	\$ 22,478	\$20,603	\$ 438	\$ 21,041
Total revenue, net of interest expense	45,077	434	45,511	42,076	438	42,514
Income tax expense	4,817	434	5,251	3,539	438	3,977

Table 57 Period-end and Average Supplemental Financial Data and Reconciliations to GAAP Financial Measures

(Dollars in millions)	Period-end		Average Three Months Ended June 30		Six Months Ended June 30	
	June 30 2017	December 31 2016	2017	2016	2017	2016
Common shareholders' equity	\$245,767	\$241,620	\$246,003	\$240,376	\$244,452	\$238,803
Goodwill	(68,969 )	(69,744 )	(69,489 )	(69,751 )	(69,616 )	(69,756 )
Intangible assets (excluding MSR)	(2,610 )	(2,989 )	(2,743 )	(3,480 )	(2,833 )	(3,584 )
Related deferred tax liabilities	1,471	1,545	1,506	1,662	1,522	1,684
Tangible common shareholders' equity	\$175,659	\$170,432	\$175,277	\$168,807	\$173,525	\$167,147
Shareholders' equity	\$270,987	\$266,840	\$271,223	\$265,354	\$269,672	\$262,889
Goodwill	(68,969 )	(69,744 )	(69,489 )	(69,751 )	(69,616 )	(69,756 )
Intangible assets (excluding MSR)	(2,610 )	(2,989 )	(2,743 )	(3,480 )	(2,833 )	(3,584 )
Related deferred tax	1,471	1,545	1,506	1,662	1,522	1,684

liabilities					
Tangible					
shareholder	\$200,879	\$ 195,652	\$200,497	\$193,785	\$ 198,745
equity					\$191,233
Total					
assets	\$2,254,529	\$ 2,187,702			
Goodwill	(68,969 )	(69,744 )			
Intangible					
assets					
(excluding	(2,610 )	(2,989 )			
MSRs)					
Related					
deferred					
tax	1,471	1,545			
liabilities					
Tangible					
assets	\$2,184,421	\$ 2,116,514			

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Item 3. Quantitative and Qualitative Disclosures about Market Risk

See Market Risk Management on page 60 in the MD&A and the sections referenced therein for Quantitative and Qualitative Disclosures about Market Risk.

Item 4. Controls and Procedures

Disclosure Controls and Procedures

As of the end of the period covered by this report, the Corporation's management, including the Chief Executive Officer and Chief Financial Officer, conducted an evaluation of the effectiveness and design of the Corporation's disclosure controls and procedures (as that term is defined in Rule 13a-15(e) of the Exchange Act). Based upon that evaluation, the Corporation's Chief Executive Officer and Chief Financial Officer concluded that the Corporation's disclosure controls and procedures were effective, as of the end of the period covered by this report, in recording, processing, summarizing and reporting information required to be disclosed by the Corporation in reports that it files or submits under the Exchange Act, within the time periods specified in the Securities and Exchange Commission's rules and forms.

Changes in Internal Control Over Financial Reporting

There have been no changes in the Corporation's internal control over financial reporting (as defined in Rule 13a-15(f) of the Exchange Act) during the three months ended June 30, 2017, that have materially affected, or are reasonably likely to materially affect, the Corporation's internal control over financial reporting.

## Part I. Financial Information

## Item 1. Financial Statements

## Bank of America Corporation and Subsidiaries

## Consolidated Statement of Income

(Dollars in millions, except per share information)	Three Months Ended June 30		Six Months Ended June 30	
	2017	2016	2017	2016
Interest income				
Loans and leases	\$8,920	\$ 8,219	\$17,674	\$ 16,479
Debt securities	2,594	2,261	5,135	4,778
Federal funds sold and securities borrowed or purchased under agreements to resell	560	260	999	536
Trading account assets	1,163	1,075	2,239	2,254
Other interest income	909	759	1,809	1,535
Total interest income	14,146	12,574	27,856	25,582
Interest expense				
Deposits	346	245	628	470
Short-term borrowings	917	626	1,564	1,239
Trading account liabilities	307	242	571	534
Long-term debt	1,590	1,343	3,049	2,736
Total interest expense	3,160	2,456	5,812	4,979
Net interest income	10,986	10,118	22,044	20,603
Noninterest income				
Card income	1,469	1,464	2,918	2,894
Service charges	1,977	1,871	3,895	3,708
Investment and brokerage services	3,317	3,201	6,579	6,383
Investment banking income	1,532	1,408	3,116	2,561
Trading account profits	1,956	2,018	4,287	3,680
Mortgage banking income	230	312	352	745
Gains on sales of debt securities	101	249	153	439
Other income	1,261	645	1,733	1,063
Total noninterest income	11,843	11,168	23,033	21,473
Total revenue, net of interest expense	22,829	21,286	45,077	42,076
Provision for credit losses	726	976	1,561	1,973
Noninterest expense				
Personnel	7,712	7,722	16,870	16,574
Occupancy	1,001	1,036	2,001	2,064
Equipment	427	451	865	914
Marketing	442	414	774	833
Professional fees	485	472	941	897
Amortization of intangibles	160	186	322	373
Data processing	773	717	1,567	1,555
Telecommunications	177	189	368	362
Other general operating	2,549	2,306	4,866	4,737
Total noninterest expense	13,726	13,493	28,574	28,309

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Income before income taxes	8,377	6,817	14,942	11,794
Income tax expense	3,108	2,034	4,817	3,539
Net income	\$5,269	\$ 4,783	\$10,125	\$ 8,255
Preferred stock dividends	361	361	863	818
Net income applicable to common shareholders	\$4,908	\$ 4,422	\$9,262	\$ 7,437
Per common share information				
Earnings	\$0.49	\$ 0.43	\$0.92	\$ 0.72
Diluted earnings	0.46	0.41	0.87	0.68
Dividends paid	0.075	0.05	0.15	0.10
Average common shares issued and outstanding (in thousands)	10,013,500	10,328,424	10,056,111	10,308,241
Average diluted common shares issued and outstanding (in thousands)	10,822,069	10,059,167	10,868,431	11,079,939
See accompanying Notes to Consolidated Financial Statements.				

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## Bank of America Corporation and Subsidiaries

## Consolidated Statement of Comprehensive Income

(Dollars in millions)	Three Months		Six Months Ended	
	Ended June 30		June 30	
	2017	2016	2017	2016
Net income	\$5,269	\$4,783	\$10,125	\$8,255
Other comprehensive income (loss), net-of-tax:				
Net change in debt and marketable equity securities	568	755	469	3,111
Net change in debit valuation adjustments	(78 )	(13 )	(69 )	114
Net change in derivatives	94	126	132	150
Employee benefit plan adjustments	27	13	54	23
Net change in foreign currency translation adjustments	100	(21 )	97	(9 )
Other comprehensive income	711	860	683	3,389
Comprehensive income	\$5,980	\$5,643	\$10,808	\$11,644

See accompanying Notes to Consolidated Financial Statements.

## Bank of America Corporation and Subsidiaries

## Consolidated Balance Sheet

(Dollars in millions)	June 30 2017	December 31 2016
Assets		
Cash and due from banks	\$29,974	\$30,719
Interest-bearing deposits with the Federal Reserve, non-U.S. central banks and other banks	128,730	117,019
Cash and cash equivalents	158,704	147,738
Time deposits placed and other short-term investments	10,152	9,861
Federal funds sold and securities borrowed or purchased under agreements to resell (includes \$50,758 and \$49,750 measured at fair value)	217,201	198,224
Trading account assets (includes \$117,313 and \$106,057 pledged as collateral)	216,369	180,209
Derivative assets	39,190	42,512
Debt securities:		
Carried at fair value (includes \$29,782 and \$29,804 pledged as collateral)	315,509	313,660
Held-to-maturity, at cost (fair value – \$117,330 and \$115,285; \$4,184 and \$8,233 pledged as collateral)	119,008	117,071
Total debt securities	434,517	430,731
Loans and leases (includes \$7,325 and \$7,085 measured at fair value and \$41,913 and \$31,805 pledged as collateral)	916,666	906,683
Allowance for loan and lease losses	(10,875)	(11,237)
Loans and leases, net of allowance	905,791	895,446
Premises and equipment, net	8,904	9,139
Mortgage servicing rights	2,501	2,747
Goodwill	68,969	68,969
Intangible assets	2,610	2,922
Loans held-for-sale (includes \$2,707 and \$4,026 measured at fair value)	5,882	9,066
Customer and other receivables (includes \$250 measured at fair value at June 30, 2017)	59,342	58,759
Assets of business held for sale (includes \$619 measured at fair value at December 31, 2016)	—	10,670
Other assets (includes \$14,865 and \$13,802 measured at fair value)	124,397	120,709
Total assets	\$2,254,529	\$2,187,702

Assets of consolidated variable interest entities included in total assets above (isolated to settle the liabilities of the variable interest entities)

Trading account assets	\$4,543	\$5,773
Loans and leases	51,604	56,001
Allowance for loan and lease losses	(1,004)	(1,032)
Loans and leases, net of allowance	50,600	54,969
Loans held-for-sale	93	188
All other assets	1,136	1,596
Total assets of consolidated variable interest entities	\$56,372	\$62,526

See accompanying Notes to Consolidated Financial Statements.



## Bank of America Corporation and Subsidiaries

## Consolidated Balance Sheet (continued)

(Dollars in millions)	June 30 2017	December 31 2016
<b>Liabilities</b>		
Deposits in U.S. offices:		
Noninterest-bearing	\$427,715	\$438,125
Interest-bearing (includes \$456 and \$731 measured at fair value)	757,888	750,891
Deposits in non-U.S. offices:		
Noninterest-bearing	13,446	12,039
Interest-bearing	63,931	59,879
Total deposits	1,262,980	1,260,934
Federal funds purchased and securities loaned or sold under agreements to repurchase (includes \$32,132 and \$35,766 measured at fair value)	196,407	170,291
Trading account liabilities	77,933	63,031
Derivative liabilities	34,880	39,480
Short-term borrowings (includes \$1,572 and \$2,024 measured at fair value)	36,494	23,944
Accrued expenses and other liabilities (includes \$17,278 and \$14,630 measured at fair value and \$757 and \$762 of reserve for unfunded lending commitments)	150,925	146,359
Long-term debt (includes \$29,073 and \$30,037 measured at fair value)	223,923	216,823
Total liabilities	1,983,542	1,920,862
Commitments and contingencies (Note 6 – Securitizations and Other Variable Interest Entities, Note 7 – Representations and Warranties Obligations and Corporate Guarantees and Note 10 – Commitments and Contingencies)		
<b>Shareholders' equity</b>		
Preferred stock, \$0.01 par value; authorized – 100,000,000 shares; issued and outstanding – 3,887,329 and 3,887,329 shares	25,220	25,220
Common stock and additional paid-in capital, \$0.01 par value; authorized – 12,800,000,000 shares; issued and outstanding – 9,878,118,264 and 10,052,625,604 shares	142,744	147,038
Retained earnings	109,628	101,870
Accumulated other comprehensive income (loss)	(6,605)	(7,288)
Total shareholders' equity	270,987	266,840
Total liabilities and shareholders' equity	\$2,254,529	\$2,187,702
Liabilities of consolidated variable interest entities included in total liabilities above		
Short-term borrowings	\$97	\$348
Long-term debt (includes \$9,752 and \$10,417 of non-recourse debt)	9,765	10,646
All other liabilities (includes \$50 and \$38 of non-recourse liabilities)	52	41
Total liabilities of consolidated variable interest entities	\$9,914	\$11,035
See accompanying Notes to Consolidated Financial Statements.		

## Bank of America Corporation and Subsidiaries

## Consolidated Statement of Changes in Shareholders' Equity

(Dollars in millions, shares in thousands)	Preferred Stock	Common Stock and Additional Paid-in Capital		Retained Earnings	Accumulated Other Comprehensive Income (Loss)		Total Shareholders' Equity
		Shares	Amount				
Balance, December 31, 2015	\$ 22,273	10,380,265	\$ 151,042	\$ 88,219	\$ (5,358	)	\$ 256,176
Net income				8,255			8,255
Net change in debt and marketable equity securities					3,111		3,111
Net change in debit valuation adjustments					114		114
Net change in derivatives					150		150
Employee benefit plan adjustments					23		23
Net change in foreign currency translation adjustments					(9	)	(9
Dividends declared:							
Common				(1,035	)		(1,035
Preferred				(818	)		(818
Issuance of preferred stock	2,947						2,947
Common stock issued under employee plans, net, and related tax effects		5,021	895				895
Common stock repurchased		(168,505	)	(2,383	)		(2,383
Balance, June 30, 2016	\$ 25,220	10,216,781	\$ 149,554	\$ 94,621	\$ (1,969	)	\$ 267,426
Balance, December 31, 2016	\$ 25,220	10,052,626	\$ 147,038	\$ 101,870	\$ (7,288	)	\$ 266,840
Net income				10,125			10,125
Net change in debt and marketable equity securities					469		469
Net change in debit valuation adjustments					(69	)	(69
Net change in derivatives					132		132
Employee benefit plan adjustments					54		54
Net change in foreign currency translation adjustments					97		97
Dividends declared:							
Common				(1,504	)		(1,504
Preferred				(863	)		(863
Common stock issued under employee plans, net and other		36,184	670				670
Common stock repurchased		(210,692	)	(4,964	)		(4,964
Balance, June 30, 2017	\$ 25,220	9,878,118	\$ 142,744	\$ 109,628	\$ (6,605	)	\$ 270,987

See accompanying Notes to Consolidated Financial Statements.



## Bank of America Corporation and Subsidiaries

## Consolidated Statement of Cash Flows

(Dollars in millions)	Six Months Ended	
	June 30	
	2017	2016
Operating activities		
Net income	\$ 10,125	\$ 8,255
Adjustments to reconcile net income to net cash (used in) provided by operating activities:		
Provision for credit losses	1,561	1,973
Gains on sales of debt securities	(153 )	(439 )
Depreciation and premises improvements amortization	743	755
Amortization of intangibles	322	373
Net amortization of premium/discount on debt securities	1,065	1,321
Deferred income taxes	3,334	3,041
Stock-based compensation	1,264	962
Loans held-for-sale:		
Originations and purchases	(18,103 )	(13,400 )
Proceeds from sales and paydowns of loans originally classified as held-for-sale	20,743	12,046
Net change in:		
Trading and derivative instruments	(23,826 )	16,277
Other assets	(7,579 )	335
Accrued expenses and other liabilities	4,450	(5,380 )
Other operating activities, net	3,034	72
Net cash (used in) provided by operating activities	(3,020 )	26,191
Investing activities		
Net change in:		
Time deposits placed and other short-term investments	(291 )	186
Federal funds sold and securities borrowed or purchased under agreements to resell	(18,977 )	(21,255 )
Debt securities carried at fair value:		
Proceeds from sales	40,704	36,519
Proceeds from paydowns and maturities	47,492	52,370
Purchases	(87,188 )	(83,361 )
Held-to-maturity debt securities:		
Proceeds from paydowns and maturities	7,644	7,239
Purchases	(9,935 )	(13,694 )
Loans and leases:		
Proceeds from sales	5,194	11,391
Purchases	(3,195 )	(7,384 )
Other changes in loans and leases, net	(14,758 )	(13,211 )
Other investing activities, net	9,137	710
Net cash used in investing activities	(24,173 )	(30,490 )
Financing activities		
Net change in:		
Deposits	2,046	18,832
Federal funds purchased and securities loaned or sold under agreements to repurchase	26,283	3,771
Short-term borrowings	12,404	4,953
Long-term debt:		
Proceeds from issuance	33,633	15,783

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Retirement of long-term debt	(29,722 )	(28,050 )
Preferred stock: Proceeds from issuance	—	2,947
Common stock repurchased	(4,964 )	(2,383 )
Cash dividends paid	(2,403 )	(1,853 )
Other financing activities, net	(582 )	(90 )
Net cash provided by financing activities	36,695	13,910
Effect of exchange rate changes on cash and cash equivalents	1,464	2,243
Net increase in cash and cash equivalents	10,966	11,854
Cash and cash equivalents at January 1	147,738	159,353
Cash and cash equivalents at June 30	\$158,704	\$171,207
See accompanying Notes to Consolidated Financial Statements.		

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Bank of America Corporation and Subsidiaries

Notes to Consolidated Financial Statements

NOTE 1 Summary of Significant Accounting Principles

Bank of America Corporation, a bank holding company and a financial holding company, provides a diverse range of financial services and products throughout the U.S. and in certain international markets. The term “the Corporation” as used herein may refer to Bank of America Corporation individually, Bank of America Corporation and its subsidiaries, or certain of Bank of America Corporation’s subsidiaries or affiliates.

Principles of Consolidation and Basis of Presentation

The Consolidated Financial Statements include the accounts of the Corporation and its majority-owned subsidiaries and those variable interest entities (VIEs) where the Corporation is the primary beneficiary. Intercompany accounts and transactions have been eliminated. Results of operations of acquired companies are included from the dates of acquisition and for VIEs, from the dates that the Corporation became the primary beneficiary. Assets held in an agency or fiduciary capacity are not included in the Consolidated Financial Statements. The Corporation accounts for investments in companies for which it owns a voting interest and for which it has the ability to exercise significant influence over operating and financing decisions using the equity method of accounting. These investments are included in other assets. Equity method investments are subject to impairment testing, and the Corporation’s proportionate share of income or loss is included in other income.

The preparation of the Consolidated Financial Statements in conformity with accounting principles generally accepted in the United States of America (GAAP) requires management to make estimates and assumptions that affect reported amounts and disclosures. Realized results could differ from those estimates and assumptions.

These unaudited Consolidated Financial Statements should be read in conjunction with the audited Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.

The nature of the Corporation's business is such that the results of any interim period are not necessarily indicative of results for a full year. In the opinion of management, all adjustments, which consist of normal recurring adjustments necessary for a fair statement of the interim period results have been made. The Corporation evaluates subsequent events through the date of filing with the Securities and Exchange Commission (SEC). Certain prior-period amounts have been reclassified to conform to current period presentation.

On June 1, 2017, the Corporation completed the previously-announced sale of its non-U.S. consumer credit card business to a third party. The Corporation has indemnified the purchaser for substantially all payment protection insurance (PPI) exposure above reserves assumed by the purchaser. The impact of the sale is an after-tax gain of \$103 million, and is presented in the Consolidated Statement of Income as other income of \$793 million and an income tax expense of \$690 million. The income tax expense is related to gains on the derivatives used to hedge

the currency risk of the net investment. Total cash proceeds from the sale were \$10.9 billion. The assets of the business sold primarily included consumer credit card receivables of \$9.8 billion and \$9.2 billion at June 1, 2017 and December 31, 2016, and goodwill of \$775 million at both of those period ends. This business was included in All Other.

New Accounting Pronouncements

Accounting for Financial Instruments -- Credit Losses

The Financial Accounting Standards Board (FASB) issued a new accounting standard effective on January 1, 2020, with early adoption permitted on January 1, 2019, that will require the earlier recognition of credit losses on loans and other financial instruments based on an expected loss model, replacing the incurred loss model that is currently in use. The standard also requires expanded credit quality disclosures, including credit quality indicators disaggregated by vintage. The Corporation is in the process of identifying and implementing required changes to loan loss estimation models and processes and evaluating the impact of this new accounting standard, which at the date of adoption is expected to increase the allowance for credit losses with a resulting negative adjustment to retained earnings.

Revenue Recognition

The FASB issued a new accounting standard effective on January 1, 2018 for recognizing revenue from contracts with customers. While the new standard does not apply to revenue associated with loans or securities, the Corporation has identified the customer contracts within the scope of the new standard and is assessing the related revenues to

determine if any accounting or internal control changes will be required for the new provisions. The timing of the Corporation's revenue recognition is not expected to materially change. The classification of certain contract costs continues to be evaluated, and the final interpretation may impact the presentation of certain contract costs. Overall, the Corporation does not expect the new standard to have a material impact on its consolidated financial position, results of operations or disclosures in the Notes to the Consolidated Financial Statements.

#### Lease Accounting

The FASB issued a new accounting standard effective on January 1, 2019 that requires substantially all leases to be recorded as assets and liabilities on the balance sheet. This new accounting standard uses a modified retrospective transition that will be applied to all prior periods presented. The Corporation is in the process of reviewing its existing lease portfolios, as well as other service contracts for embedded leases, to evaluate the impact of the new accounting standard on the financial statements, as well as the impact to regulatory capital and risk-weighted assets. The effect of the adoption will depend on its lease portfolio at the time of transition; however, the Corporation does not expect the new accounting standard to have a material impact on its consolidated financial position, results of operations or disclosures in the Notes to the Consolidated Financial Statements.

## Recognition and Measurement of Financial Assets and Financial Liabilities

The FASB issued a new accounting standard effective on January 1, 2018, with early adoption permitted for the provisions related to debit valuation adjustments (DVA), on recognition and measurement of financial instruments, including certain equity investments and financial liabilities recorded at fair value under the fair value option. In 2015, the Corporation early adopted, retrospective to January 1, 2015, the provisions of this new accounting standard related to DVA on financial liabilities accounted for under the fair value option. The Corporation does not expect the remaining provisions of this new accounting standard to have a material impact on its consolidated financial position, results of operations or disclosures in the Notes to the Consolidated Financial Statements.

## NOTE 2 Derivatives

## Derivative Balances

Derivatives are entered into on behalf of customers, for trading or to support risk management activities. Derivatives used in risk management activities include derivatives that may or may not be designated in qualifying hedge accounting relationships. Derivatives that are not designated in qualifying hedge accounting relationships are referred to as other risk management derivatives. For more information on the Corporation's derivatives and hedging activities, see Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K. The following tables present derivative instruments included on the Consolidated Balance Sheet in derivative assets and liabilities at June 30, 2017 and December 31, 2016. Balances are presented on a gross basis, prior to the application of counterparty and cash collateral netting. Total derivative assets and liabilities are adjusted on an aggregate basis to take into consideration the effects of legally enforceable master netting agreements and have been reduced by the cash collateral received or paid.

(Dollars in billions)	June 30, 2017				June 30, 2017		
	Contract/ Notional <sup>(1)</sup>	Other Risk Management Derivatives	Qualifying Accounting Hedges	Total	Gross Derivative Assets Trading and Other Risk Management Derivatives	Gross Derivative Liabilities Trading and Other Risk Management Derivatives	Total
Interest rate contracts							
Swaps	\$ 18,809.7	\$ 310.2	\$ 5.2	\$ 315.4	\$ 315.8	\$ 1.5	\$ 317.3
Futures and forwards	6,027.3	1.9	—	1.9	1.8	—	1.8
Written options	1,301.4	—	—	—	40.6	—	40.6
Purchased options	1,355.0	42.3	—	42.3	—	—	—
Foreign exchange contracts							
Swaps	1,963.6	41.6	2.9	44.5	43.6	4.0	47.6
Spot, futures and forwards	4,273.1	46.8	1.1	47.9	49.7	1.0	50.7
Written options	318.9	—	—	—	5.5	—	5.5
Purchased options	304.9	5.1	—	5.1	—	—	—
Equity contracts							
Swaps	226.8	3.8	—	3.8	4.3	—	4.3
Futures and forwards	102.5	1.8	—	1.8	1.1	—	1.1
Written options	513.4	—	—	—	22.6	—	22.6
Purchased options	445.9	24.1	—	24.1	—	—	—
Commodity contracts							
Swaps	49.3	2.0	—	2.0	4.3	—	4.3
Futures and forwards	46.7	3.4	—	3.4	0.4	—	0.4
Written options	27.9	—	—	—	1.5	—	1.5

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Purchased options	29.7	1.5	—	1.5	—	—	—
Credit derivatives <sup>(2)</sup>							
Purchased credit derivatives:							
Credit default swaps	531.1	5.3	—	5.3	10.7	—	10.7
Total return swaps/other	33.7	0.1	—	0.1	1.3	—	1.3
Written credit derivatives:							
Credit default swaps	521.6	10.5	—	10.5	4.7	—	4.7
Total return swaps/other	37.8	0.8	—	0.8	0.2	—	0.2
Gross derivative assets/liabilities		\$501.2	\$ 9.2	\$510.4	\$508.1	\$ 6.5	\$514.6
Less: Legally enforceable master netting agreements				(436.6 )			(436.6 )
Less: Cash collateral received/paid				(34.6 )			(43.1 )
Total derivative assets/liabilities <sup>(3)</sup>				\$39.2			\$34.9

<sup>(1)</sup> Represents the total contract/notional amount of derivative assets and liabilities outstanding.

<sup>(2)</sup> The net derivative asset and notional amount of written credit derivatives for which the Corporation held purchased credit derivatives with identical underlying referenced names were \$5.2 billion and \$494.3 billion at June 30, 2017. Derivative assets and liabilities reflect a central clearing counterparty's amendments to legally re-characterize daily

<sup>(3)</sup> cash variation margin from collateral, which secures an outstanding exposure, to settlement, which discharges an outstanding exposure, effective in January 2017.

(Dollars in billions)	December 31, 2016				December 31, 2016		
	Contract/ Notional <sup>(1)</sup>	Trading and Other Risk Management Derivatives	Qualifying Accounting Hedges	Total	Trading and Other Risk Management Derivatives	Qualifying Accounting Hedges	Total
Interest rate contracts							
Swaps	\$ 16,977.7	\$ 385.0	\$ 5.9	\$ 390.9	\$ 386.9	\$ 2.0	\$ 388.9
Futures and forwards	5,609.5	2.2	—	2.2	2.1	—	2.1
Written options	1,146.2	—	—	—	52.2	—	52.2
Purchased options	1,178.7	53.3	—	53.3	—	—	—
Foreign exchange contracts							
Swaps	1,828.6	54.6	4.2	58.8	58.8	6.2	65.0
Spot, futures and forwards	3,410.7	58.8	1.7	60.5	56.6	0.8	57.4
Written options	356.6	—	—	—	9.4	—	9.4
Purchased options	342.4	8.9	—	8.9	—	—	—
Equity contracts							
Swaps	189.7	3.4	—	3.4	4.0	—	4.0
Futures and forwards	68.7	0.9	—	0.9	0.9	—	0.9
Written options	431.5	—	—	—	21.4	—	21.4
Purchased options	385.5	23.9	—	23.9	—	—	—
Commodity contracts							
Swaps	48.2	2.5	—	2.5	5.1	—	5.1
Futures and forwards	49.1	3.6	—	3.6	0.5	—	0.5
Written options	29.3	—	—	—	1.9	—	1.9
Purchased options	28.9	2.0	—	2.0	—	—	—
Credit derivatives <sup>(2)</sup>							
Purchased credit derivatives:							
Credit default swaps	604.0	8.1	—	8.1	10.3	—	10.3
Total return swaps/other	21.2	0.4	—	0.4	1.5	—	1.5
Written credit derivatives:							
Credit default swaps	614.4	10.7	—	10.7	7.5	—	7.5
Total return swaps/other	25.4	1.0	—	1.0	0.2	—	0.2
Gross derivative assets/liabilities		\$ 619.3	\$ 11.8	\$ 631.1	\$ 619.3	\$ 9.0	\$ 628.3
Less: Legally enforceable master netting agreements				(545.3 )			(545.3 )
Less: Cash collateral received/paid				(43.3 )			(43.5 )
Total derivative assets/liabilities				\$ 42.5			\$ 39.5

<sup>(1)</sup> Represents the total contract/notional amount of derivative assets and liabilities outstanding.

The net derivative asset and notional amount of written credit derivatives for which the Corporation held purchased

<sup>(2)</sup> credit derivatives with identical underlying referenced names were \$2.2 billion and \$548.9 billion at December 31, 2016.

#### Offsetting of Derivatives

The Corporation enters into International Swaps and Derivatives Association, Inc. (ISDA) master netting agreements or similar agreements with substantially all of the Corporation's derivative counterparties. Where legally enforceable, these master netting agreements give the Corporation, in the event of default by the counterparty, the right to liquidate

securities held as collateral and to offset receivables and payables with the same counterparty. For additional information on the offsetting of derivative assets and liabilities, see Note 2 – Derivatives to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.

The following table presents derivative instruments included in derivative assets and liabilities on the Consolidated Balance Sheet at June 30, 2017 and December 31, 2016 by primary risk (e.g., interest rate risk) and the platform, where applicable, on which these derivatives are transacted. Balances are presented on a gross basis, prior to the application of counterparty and cash collateral netting. Total gross derivative assets and liabilities are adjusted on an aggregate basis to take into consideration the effects of legally enforceable master netting agreements which includes reducing the balance for counterparty netting and cash collateral received or paid.

For more information on offsetting of securities financing agreements, see Note 9 – Federal Funds Sold or Purchased, Securities Financing Agreements and Short-term Borrowings.



Offsetting of Derivatives <sup>(1)</sup>

(Dollars in billions)	June 30, 2017		December 31, 2016	
	Derivative Assets	Derivative Liabilities	Derivative Assets	Derivative Liabilities
Interest rate contracts				
Over-the-counter	\$232.3	\$224.3	\$267.3	\$258.2
Over-the-counter cleared	124.6	132.6	177.2	182.8
Foreign exchange contracts				
Over-the-counter	94.2	100.6	124.3	126.7
Over-the-counter cleared	0.6	0.5	0.3	0.3
Equity contracts				
Over-the-counter	17.0	15.5	15.6	13.7
Exchange-traded	8.9	8.7	11.4	10.8
Commodity contracts				
Over-the-counter	3.0	4.3	3.7	4.9
Exchange-traded	0.8	0.6	1.1	1.0
Credit derivatives				
Over-the-counter	11.0	11.1	15.3	14.7
Over-the-counter cleared	5.1	5.2	4.3	4.3
Total gross derivative assets/liabilities, before netting				
Over-the-counter	357.5	355.8	426.2	418.2
Exchange-traded	9.7	9.3	12.5	11.8
Over-the-counter cleared	130.3	138.3	181.8	187.4
Less: Legally enforceable master netting agreements and cash collateral received/paid				
Over-the-counter	(332.6 )	(333.1 )	(398.2 )	(392.6 )
Exchange-traded	(8.6 )	(8.6 )	(8.9 )	(8.9 )
Over-the-counter cleared	(130.0 )	(138.0 )	(181.5 )	(187.3 )
Derivative assets/liabilities, after netting	26.3	23.7	31.9	28.6
Other gross derivative assets/liabilities <sup>(2)</sup>	12.9	11.2	10.6	10.9
Total derivative assets/liabilities <sup>(3)</sup>	39.2	34.9	42.5	39.5
Less: Financial instruments collateral <sup>(4)</sup>	(12.2 )	(10.8 )	(13.5 )	(10.5 )
Total net derivative assets/liabilities	\$27.0	\$24.1	\$29.0	\$29.0

Over-the-counter (OTC) derivatives include bilateral transactions between the Corporation and a particular counterparty. OTC-cleared derivatives include bilateral transactions between the Corporation and a counterparty where the transaction is cleared through a clearinghouse, and exchange-traded derivatives include listed options transacted on an exchange.

<sup>(2)</sup> Consists of derivatives entered into under master netting agreements where the enforceability of these agreements is uncertain under bankruptcy laws in some countries or industries.

<sup>(3)</sup> Derivative assets and liabilities reflect a central clearing counterparty's amendments to legally re-characterize daily cash variation margin from collateral, which secures an outstanding exposure, to settlement, which discharges an outstanding exposure, effective in January 2017.

<sup>(4)</sup> Amounts are limited to the derivative asset/liability balance and, accordingly, do not include excess collateral received/pledged. Financial instruments collateral includes securities collateral received or pledged and cash securities held and posted at third-party custodians that are not offset on the Consolidated Balance Sheet but shown as a reduction to derive net derivative assets and liabilities.

ALM and Risk Management Derivatives

The Corporation's asset and liability management (ALM) and risk management activities include the use of derivatives to mitigate risk to the Corporation including derivatives designated in qualifying hedge accounting relationships and derivatives used in other risk management activities. For additional information, see Note 2 – Derivatives to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.

#### Derivatives Designated as Accounting Hedges

The Corporation uses various types of interest rate, commodity and foreign exchange derivative contracts to protect against changes in the fair value of its assets and liabilities due to fluctuations in interest rates, commodity prices and exchange rates (fair value hedges). The Corporation also uses these types of contracts and equity derivatives to protect against changes in the cash flows of its assets and liabilities, and other forecasted transactions (cash flow hedges). The Corporation hedges its net investment in consolidated non-U.S. operations determined to

have functional currencies other than the U.S. Dollar using forward exchange contracts and cross-currency basis swaps, and by issuing foreign currency-denominated debt (net investment hedges).

#### Fair Value Hedges

The following table summarizes information related to fair value hedges for the three and six months ended June 30, 2017 and 2016, including hedges of interest rate risk on long-term debt that were acquired as part of a business combination and redesignated at that time. At redesignation, the fair value of the derivatives was positive. As the derivatives mature, the fair value will approach zero. As a result, ineffectiveness will occur and the fair value changes in the derivatives and the long-term debt being hedged may be directionally the same in certain scenarios. Based on a regression analysis, the derivatives continue to be highly effective at offsetting changes in the fair value of the long-term debt attributable to interest rate risk.

Derivatives Designated as Fair Value Hedges

Gains (Losses) (Dollars in millions)	Three Months Ended June 30, 2017			Six Months Ended June 30, 2017		
	Derivative	Hedged Item	Hedge Ineffectiveness	Derivative	Hedged Item	Hedge Ineffectiveness
Interest rate risk on long-term debt <sup>(1)</sup>	\$272	\$(422)	\$ (150)	\$(478)	\$144	\$ (334)
Interest rate and foreign currency risk on long-term debt <sup>(1)</sup>	901	(877)	24	1,024	(1,010)	14
Interest rate risk on available-for-sale securities <sup>(2)</sup>	(80)	70	(10)	(63)	33	(30)
Price risk on commodity inventory <sup>(3)</sup>	2	(1)	1	8	(7)	1
Total	\$1,095	\$(1,230)	\$ (135)	\$491	\$(840)	\$ (349)

  

Gains (Losses) (Dollars in millions)	Three Months Ended June 30, 2016			Six Months Ended June 30, 2016		
	Derivative	Hedged Item	Hedge Ineffectiveness	Derivative	Hedged Item	Hedge Ineffectiveness
Interest rate risk on long-term debt <sup>(1)</sup>	\$1,263	\$(1,380)	\$ (117)	\$3,924	\$(4,234)	\$ (310)
Interest rate and foreign currency risk on long-term debt <sup>(1)</sup>	(495)	487	(8)	344	(359)	(15)
Interest rate risk on available-for-sale securities <sup>(2)</sup>	(215)	198	(17)	(366)	330	(36)
Price risk on commodity inventory <sup>(3)</sup>	(8)	8	—	(6)	6	—
Total	\$545	\$(687)	\$ (142)	\$3,896	\$(4,257)	\$ (361)

<sup>(1)</sup> Amounts are recorded in interest expense on long-term debt and in other income.

<sup>(2)</sup> Amounts are recorded in interest income on debt securities.

<sup>(3)</sup> Amounts relating to commodity inventory are recorded in trading account profits.

Cash Flow and Net Investment Hedges

The table below summarizes certain information related to cash flow hedges and net investment hedges for the three and six months ended June 30, 2017 and 2016. Of the \$763 million after-tax net loss (\$1.2 billion pre-tax) on derivatives in accumulated other comprehensive income (OCI) at June 30, 2017, \$141 million after-tax (\$226 million pre-tax) is expected to be reclassified into earnings in the next 12 months. These net losses reclassified into

earnings are expected to primarily reduce net interest income related to the respective hedged items. Amounts related to price risk on restricted stock awards reclassified from accumulated OCI are recorded in personnel expense. For terminated cash flow hedges, the time period over which the majority of the forecasted transactions are hedged is approximately seven years, with a maximum length of time for certain forecasted transactions of 19 years.

Derivatives Designated as Cash Flow and Net Investment Hedges

Gains (Losses) Recognized in Accumulated OCI on Derivative	Three Months Ended June 30, 2017			Six Months Ended June 30, 2017		
	Gains (Losses) Recognized in Accumulated OCI	Gains (Losses) Reclassified from Accumulated OCI	Hedge Ineffectiveness and Amounts Excluded from Effectiveness Testing <sup>(1)</sup>	Gains (Losses) Recognized in Accumulated OCI	Gains (Losses) Reclassified from Accumulated OCI	Hedge Ineffectiveness and Amounts Excluded from Effectiveness Testing <sup>(1)</sup>
Cash flow hedges						
Interest rate risk on variable-rate portfolios	\$64	\$ (108)	\$ 2	\$27	\$ (220)	\$ 5
Price risk on restricted stock awards <sup>(2)</sup>	6	29	—	34	71	—

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Total	\$70	\$ (79 )	\$ 2	\$61	\$ (149 )	\$ 5
Net investment hedges						
Foreign exchange risk <sup>(3)</sup>	\$(4,336)	\$ 1,928	\$ (33 )	\$(4,725)	\$ 1,798	\$ (48 )

Three Months Ended June 30, 2016      Six Months Ended June 30, 2016

Cash flow hedges						
Interest rate risk on variable-rate portfolios	\$19	\$ (164 )	\$ —	\$58	\$ (328 )	\$ 6
Price risk on restricted stock awards <sup>(2)</sup>	(1 )	(19 )	—	(199 )	(53 )	—
Total	\$18	\$ (183 )	\$ —	\$(141 )	\$ (381 )	\$ 6
Net investment hedges						
Foreign exchange risk	\$592	\$ 1	\$ (23 )	\$(41 )	\$ 1	\$ (166 )

(1) Amounts related to cash flow hedges represent hedge ineffectiveness and amounts related to net investment hedges represent amounts excluded from effectiveness testing.

(2) Gains (losses) recognized in accumulated OCI are primarily related to the change in the Corporation's stock price for the period.

(3) Substantially all of the gains in income reclassified from accumulated OCI are comprised of the gain recognized on derivatives used to hedge the currency risk of the Corporation's net investment in its non-U.S. consumer credit card business, which was sold on June 1, 2017. For additional information, see Note 12 – Accumulated Other Comprehensive Income (Loss).

## Other Risk Management Derivatives

Other risk management derivatives are used by the Corporation to reduce certain risk exposures. These derivatives are not qualifying accounting hedges because either they did not qualify for or were not designated as accounting hedges. The table below presents gains (losses) on these derivatives for the three and six months ended June 30, 2017 and 2016. These gains (losses) are largely offset by the income or expense that is recorded on the hedged item.

## Other Risk Management Derivatives

## Gains (Losses)

	Three Months Ended June 30		Six Months Ended June 30	
(Dollars in millions)	2017	2016	2017	2016
Interest rate risk on mortgage banking income <sup>(1)</sup>	\$55	\$279	\$31	\$825
Credit risk on loans <sup>(2)</sup>	(1 )	(31 )	(3 )	(96 )
Interest rate and foreign currency risk on ALM activities <sup>(3)</sup>	238	(824 )	(52 )	(1,708)
Price risk on restricted stock awards <sup>(4)</sup>	24	(27 )	128	(768 )
Other	4	14	5	40

Net gains on these derivatives are recorded in mortgage banking income as they are used to mitigate the interest rate risk related to mortgage servicing rights (MSRs), interest rate lock commitments (IRLCs) and mortgage loans held-for-sale, all of which are measured at fair value with changes in fair value recorded in mortgage banking income. The net gains on IRLCs related to the origination of mortgage loans that are held-for-sale, which are not included in the table but are considered derivative instruments, were \$60 million and \$116 million for the three and six months ended June 30, 2017 compared to \$177 million and \$329 million for the same periods in 2016.

<sup>(2)</sup> Primarily related to derivatives that are economic hedges of credit risk on loans. Net gains (losses) on these derivatives are recorded in other income.

<sup>(3)</sup> Primarily related to hedges of debt securities carried at fair value and hedges of foreign currency-denominated debt. Gains (losses) on these derivatives and the related hedged items are recorded in other income.

<sup>(4)</sup> Gains (losses) on these derivatives are recorded in personnel expense.

## Transfers of Financial Assets with Risk Retained through Derivatives

The Corporation enters into certain transactions involving the transfer of financial assets that are accounted for as sales where substantially all of the economic exposure to the transferred financial assets is retained through derivatives (e.g., interest rate and/or credit), but the Corporation does not retain control over the assets transferred. Through June 30, 2017 and December 31, 2016, the Corporation transferred \$6.3 billion and \$6.6 billion of non-U.S. government-guaranteed mortgage-backed securities

(MBS) to a third-party trust and retained economic exposure to the transferred assets through derivative contracts. In connection with these transfers, the Corporation received gross cash proceeds of \$6.3 billion and \$6.6 billion at the transfer dates. At June 30, 2017 and December 31, 2016, the fair value of the transferred securities was \$6.2 billion and \$6.3 billion. Derivative assets of \$43 million at both period ends and liabilities of \$7 million and \$10 million were recorded at June 30, 2017 and December 31, 2016, and are included in credit derivatives in the derivative instruments table on page 76.

## Sales and Trading Revenue

The Corporation enters into trading derivatives to facilitate client transactions and to manage risk exposures arising from trading account assets and liabilities. It is the Corporation's policy to include these derivative instruments in its trading activities which include derivatives and non-derivative cash instruments. The resulting risk from these derivatives is managed on a portfolio basis as part of the Corporation's Global Markets business segment. For more information on sales and trading revenue, see Note 2 – Derivatives to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.

The following table, which includes both derivatives and non-derivative cash instruments, identifies the amounts in the respective income statement line items attributable to the Corporation's sales and trading revenue in Global Markets, categorized by primary risk, for the three and six months ended June 30, 2017 and 2016. The difference between total trading account profits in the following table and in the Consolidated Statement of Income represents trading activities in business segments other than Global Markets. This table includes debit valuation and funding valuation adjustment (DVA/FVA) gains (losses). Global Markets results in Note 17 – Business Segment Information are presented on a fully taxable-equivalent (FTE) basis. The following table is not presented on an FTE basis.

## Sales and Trading Revenue

(Dollars in millions)	Three Months Ended June 30 2017				Six Months Ended June 30 2017			
	Trading Net		Other (1)	Total	Trading Net		Other (1)	Total
	Account Profits	Interest Income			Account Profits	Interest Income		
Interest rate risk	\$326	\$ 226	\$117	\$669	\$674	\$533	\$235	\$1,442
Foreign exchange risk	347	(1 )	(39 )	307	715	(4 )	(80 )	631
Equity risk	776	(155 )	475	1,096	1,447	(230 )	962	2,179
Credit risk	264	621	148	1,033	950	1,268	345	2,563
Other risk	30	5	18	53	134	10	51	195
Total sales and trading revenue	\$1,743	\$ 696	\$719	\$3,158	\$3,920	\$1,577	\$1,513	\$7,010

(Dollars in millions)	Three Months Ended June 30 2016				Six Months Ended June 30 2016			
	Trading Net		Other (1)	Total	Trading Net		Other (1)	Total
	Account Profits	Interest Income			Account Profits	Interest Income		
Interest rate risk	\$429	\$ 334	\$75	\$838	\$923	\$759	\$126	\$1,808
Foreign exchange risk	344	(2 )	(37 )	305	684	(3 )	(73 )	608
Equity risk	586	(17 )	510	1,079	1,017	(16 )	1,108	2,109
Credit risk	414	642	118	1,174	622	1,268	256	2,146
Other risk	99	(11 )	9	97	221	(26 )	26	221
Total sales and trading revenue	\$1,872	\$ 946	\$675	\$3,493	\$3,467	\$1,982	\$1,443	\$6,892

Represents amounts in investment and brokerage services and other income that are recorded in Global Markets and included in the definition of sales and trading revenue. Includes investment and brokerage services revenue of \$514 million and \$1.0 billion for the three and six months ended June 30, 2017 and \$517 million and \$1.1 billion for the same periods in 2016.

## Credit Derivatives

The Corporation enters into credit derivatives primarily to facilitate client transactions and to manage credit risk exposures. Credit derivatives derive value based on an underlying third-party referenced obligation or a portfolio of referenced obligations and generally require the Corporation, as the seller of credit protection, to make payments to a buyer upon the occurrence of a pre-defined credit event. Such credit events generally include bankruptcy of the referenced credit entity and failure to pay under the obligation,

as well as acceleration of indebtedness and payment repudiation or moratorium. For credit derivatives based on a portfolio of referenced credits or credit indices, the Corporation may not be required to make payment until a specified amount of loss has occurred and/or may only be required to make payment up to a specified amount.

Credit derivative instruments where the Corporation is the seller of credit protection and their expiration at June 30, 2017 and December 31, 2016 are summarized in the following table.

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## Credit Derivative Instruments

(Dollars in millions)	June 30, 2017 Carrying Value				Total
	Less than One Year	One to Three Years	Three to Five Years	Over Five Years	
Credit default swaps:					
Investment grade	\$5	\$31	\$255	\$355	\$646
Non-investment grade	317	605	565	2,614	4,101
Total	322	636	820	2,969	4,747
Total return swaps/other:					
Investment grade	13	—	—	—	13
Non-investment grade	139	1	—	49	189
Total	152	1	—	49	202
Total credit derivatives	\$474	\$637	\$820	\$3,018	\$4,949
Credit-related notes:					
Investment grade	\$—	\$1	\$321	\$875	\$1,197
Non-investment grade	17	20	12	1,307	1,356
Total credit-related notes	\$17	\$21	\$333	\$2,182	\$2,553
Maximum Payout/Notional					
Credit default swaps:					
Investment grade	\$97,928	\$117,056	\$113,761	\$22,466	\$351,211
Non-investment grade	69,315	45,426	40,295	15,342	170,378
Total	167,243	162,482	154,056	37,808	521,589
Total return swaps/other:					
Investment grade	24,146	—	—	—	24,146
Non-investment grade	7,757	4,638	305	915	13,615
Total	31,903	4,638	305	915	37,761
Total credit derivatives	\$199,146	\$167,120	\$154,361	\$38,723	\$559,350
December 31, 2016 Carrying Value					
Credit default swaps:					
Investment grade	\$10	\$64	\$535	\$783	\$1,392
Non-investment grade	771	1,053	908	3,339	6,071
Total	781	1,117	1,443	4,122	7,463
Total return swaps/other:					
Investment grade	16	—	—	—	16
Non-investment grade	127	10	2	1	140
Total	143	10	2	1	156
Total credit derivatives	\$924	\$1,127	\$1,445	\$4,123	\$7,619
Credit-related notes:					
Investment grade	\$—	\$12	\$542	\$1,423	\$1,977
Non-investment grade	70	22	60	1,318	1,470
Total credit-related notes	\$70	\$34	\$602	\$2,741	\$3,447
Maximum Payout/Notional					
Credit default swaps:					
Investment grade	\$121,083	\$143,200	\$116,540	\$21,905	\$402,728



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Non-investment grade	84,755	67,160	41,001	18,711	211,627
Total	205,838	210,360	157,541	40,616	614,355
Total return swaps/other:					
Investment grade	12,792	—	—	—	12,792
Non-investment grade	6,638	5,127	589	208	12,562
Total	19,430	5,127	589	208	25,354
Total credit derivatives	\$225,268	\$215,487	\$158,130	\$40,824	\$639,709

Credit derivatives are classified as investment and non-investment grade based on the credit quality of the underlying referenced obligation. The Corporation considers ratings of BBB- or higher as investment grade. Non-investment grade includes non-rated credit derivative instruments. The Corporation discloses internal categorizations of investment grade and non-investment grade consistent with how risk is managed for these instruments.

The notional amount represents the maximum amount payable by the Corporation for most credit derivatives. However, the Corporation does not monitor its exposure to credit derivatives based solely on the notional amount because this measure does not take into consideration the probability of occurrence. As such, the notional amount is not a reliable indicator of the Corporation's exposure to these contracts. Instead, a risk framework is used to define risk tolerances and establish limits to help ensure that certain credit risk-related losses occur within acceptable, predefined limits.

Credit-related notes in the table on page 82 include investments in securities issued by collateralized debt obligation (CDO), collateralized loan obligation (CLO) and credit-linked note vehicles. These instruments are primarily classified as trading securities. The carrying value of these instruments equals the Corporation's maximum exposure to loss. The Corporation is not obligated to make any payments to the entities under the terms of the securities owned.

#### Credit-related Contingent Features and Collateral

The majority of the Corporation's derivative contracts contain credit-risk related features, primarily in the form of ISDA master netting agreements and credit support documentation that enhance the creditworthiness of these instruments. Therefore, events such as a credit rating downgrade or a breach of credit covenants would typically require an increase in the amount of collateral required of the counterparty, where applicable, and/or allow the Corporation to take additional protective measures such as early termination of all trades. At June 30, 2017 and December 31, 2016, the Corporation held cash and securities collateral of \$77.0 billion and \$85.5 billion, and posted cash and securities collateral of \$67.2 billion and \$71.1 billion in the normal course of business under derivative agreements, excluding cross-product margining agreements where clients are permitted to margin on a net basis for both derivative and secured financing arrangements.

In connection with certain OTC derivative contracts and other trading agreements, the Corporation can be required to provide additional collateral or to terminate transactions with certain counterparties in the event of a downgrade of the senior debt ratings of the Corporation or certain subsidiaries. At June 30, 2017, the amount of collateral, calculated based on the terms of the contracts, that the Corporation and certain subsidiaries could be required to post to counterparties but had not yet posted to counterparties was approximately \$2.5 billion, including \$1.8 billion for Bank of America, N.A. (BANA). For more information on credit-related contingent features and collateral, see Note 2 – Derivatives to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.

Some counterparties are currently able to unilaterally terminate certain contracts, or the Corporation or certain subsidiaries may be required to take other action such as find a suitable replacement or obtain a guarantee. At June 30, 2017, the liability recorded for these derivative contracts was \$31 million.

The following table presents the amount of additional collateral that would have been contractually required by derivative contracts and other trading agreements at June 30, 2017 if the rating agencies had downgraded their long-term senior debt ratings for the Corporation or certain subsidiaries by one incremental notch and by an additional second incremental notch.

#### Additional Collateral Required to be Posted Upon Downgrade

(Dollars in millions)	June 30, 2017	
	One incremental notch	Second incremental notch
Bank of America Corporation	\$ 483	\$ 704
Bank of America, N.A. and subsidiaries <sup>(1)</sup>	349	350

<sup>(1)</sup> Included in Bank of America Corporation collateral requirements in this table.

The table below presents the derivative liabilities that would be subject to unilateral termination by counterparties and the amounts of collateral that would have been contractually required at June 30, 2017 if the long-term senior debt ratings for the Corporation or certain subsidiaries had been lower by one incremental notch and by an additional second incremental notch.

Derivative Liabilities Subject to  
Unilateral Termination Upon  
Downgrade

	June 30, 2017	One Second
(Dollars in millions) incremental		
	notch	notch
Derivative liabilities	\$545	\$ 1,164
Collateral posted	422	821
Valuation Adjustments on Derivatives		

The table below presents credit valuation adjustment (CVA), DVA and FVA gains (losses) on derivatives, which are recorded in trading account profits, on a gross and net of hedge basis for the three and six months ended June 30, 2017 and 2016. For more information on the valuation adjustments on derivatives, see Note 2 – Derivatives to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.

Valuation Adjustments on Derivatives <sup>(1)</sup>

Gains (Losses)	Three Months Ended			
	June 30			
	2017	2016		
(Dollars in millions)	Gross	Net	Gross	Net
Derivative assets (CVA)	\$97	\$52	\$(26)	\$33
Derivative assets/liabilities (FVA)	27	41	23	25
Derivative liabilities (DVA)	(128)	(125)	(75)	(141)

	Six Months Ended June			
	30			
	2017	2016		
	Gross	Net	Gross	Net
Derivative assets (CVA)	\$258	\$78	\$(235)	\$85
Derivative assets/liabilities (FVA)	76	97	(33)	(31)
Derivative liabilities (DVA)	(278)	(218)	231	43

At June 30, 2017 and December 31, 2016, cumulative CVA reduced the derivative assets balance by \$749 million <sup>(1)</sup> and \$1.0 billion, cumulative FVA reduced the net derivatives balance by \$220 million and \$296 million, and cumulative DVA reduced the derivative liabilities balance by \$496 million and \$774 million, respectively.

## NOTE 3 Securities

The table below presents the amortized cost, gross unrealized gains and losses, and fair value of available-for-sale (AFS) debt securities, other debt securities carried at fair value, held-to-maturity (HTM) debt securities and AFS marketable equity securities at June 30, 2017 and December 31, 2016.

## Debt Securities and Available-for-Sale Marketable Equity Securities

(Dollars in millions)	June 30, 2017			Fair Value
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	
Available-for-sale debt securities				
Mortgage-backed securities:				
Agency	\$193,222	\$ 662	\$ (1,710)	\$192,174
Agency-collateralized mortgage obligations	7,441	84	(41)	7,484
Commercial	12,574	48	(181)	12,441
Non-agency residential <sup>(1)</sup>	1,673	258	(17)	1,914
Total mortgage-backed securities	214,910	1,052	(1,949)	214,013
U.S. Treasury and agency securities	51,903	143	(623)	51,423
Non-U.S. securities	6,595	9	(2)	6,602
Other taxable securities, substantially all asset-backed securities	8,976	80	(5)	9,051
Total taxable securities	282,384	1,284	(2,579)	281,089
Tax-exempt securities	18,476	121	(120)	18,477
Total available-for-sale debt securities	300,860	1,405	(2,699)	299,566
Other debt securities carried at fair value	15,771	245	(73)	15,943
Total debt securities carried at fair value	316,631	1,650	(2,772)	315,509
Held-to-maturity debt securities, substantially all U.S. agency mortgage-backed securities	119,008	162	(1,840)	117,330
Total debt securities <sup>(2)</sup>	\$435,639	\$ 1,812	\$ (4,612)	\$432,839
Available-for-sale marketable equity securities <sup>(3)</sup>	\$8	\$ 69	\$ —	\$77

	December 31, 2016			
Available-for-sale debt securities				
Mortgage-backed securities:				
Agency	\$190,809	\$ 640	\$ (1,963)	\$189,486
Agency-collateralized mortgage obligations	8,296	85	(51)	8,330
Commercial	12,594	21	(293)	12,322
Non-agency residential <sup>(1)</sup>	1,863	181	(31)	2,013
Total mortgage-backed securities	213,562	927	(2,338)	212,151
U.S. Treasury and agency securities	48,800	204	(752)	48,252
Non-U.S. securities	6,372	13	(3)	6,382
Other taxable securities, substantially all asset-backed securities	10,573	64	(23)	10,614
Total taxable securities	279,307	1,208	(3,116)	277,399
Tax-exempt securities	17,272	72	(184)	17,160
Total available-for-sale debt securities	296,579	1,280	(3,300)	294,559
Less: Available-for-sale securities of business held for sale <sup>(4)</sup>	(619)	—	—	(619)
Other debt securities carried at fair value	19,748	121	(149)	19,720
Total debt securities carried at fair value	315,708	1,401	(3,449)	313,660
Held-to-maturity debt securities, substantially all U.S. agency mortgage-backed securities	117,071	248	(2,034)	115,285

Total debt securities <sup>(2)</sup>	\$432,779	\$ 1,649	\$ (5,483 )	\$428,945
Available-for-sale marketable equity securities <sup>(3)</sup>	\$325	\$ 51	\$ (1 )	\$375

(1) At June 30, 2017 and December 31, 2016, the underlying collateral type included approximately 60 percent and 60 percent prime, 20 percent and 19 percent Alt-A, and 20 percent and 21 percent subprime.

The Corporation had debt securities from Fannie Mae (FNMA) and Freddie Mac (FHLMC) that each exceeded 10 percent of shareholders' equity, with an amortized cost of \$161.8 billion and \$46.5 billion, and a fair value of (2) \$160.4 billion and \$46.3 billion at June 30, 2017. Debt securities from FNMA and FHLMC that exceeded 10 percent of shareholders' equity had an amortized cost of \$156.4 billion and \$48.7 billion, and a fair value of \$154.4 billion and \$48.3 billion at December 31, 2016.

(3) Classified in other assets on the Consolidated Balance Sheet.

(4) Represents AFS debt securities of business held for sale. On June 1, 2017, the Corporation completed the sale of its non-U.S. consumer credit card business.

At June 30, 2017, the accumulated net unrealized loss on AFS debt securities included in accumulated OCI was \$799 million, net of the related income tax benefit of \$495 million. At both June 30, 2017 and December 31, 2016, the Corporation had nonperforming AFS debt securities of \$121 million.

The table below presents the components of other debt securities carried at fair value where the changes in fair value are reported in other income. In the three and six months ended June 30, 2017, the Corporation recorded unrealized mark-to-market net gains of \$83 million and \$199 million, and realized net losses of

\$14 million and \$118 million, compared to unrealized mark-to-market net gains of \$24 million and net losses of \$72 million, and realized net losses of \$34 million and \$37 million for the same periods in 2016. These amounts exclude hedge results.

#### Other Debt Securities Carried at Fair Value

(Dollars in millions)	June 30 2017	December 31 2016
Mortgage-backed securities:		
Agency-collateralized mortgage obligations	\$5	\$ 5
Non-agency residential	3,037	3,139
Total mortgage-backed securities	3,042	3,144
Non-U.S. securities <sup>(1)</sup>	12,665	16,336
Other taxable securities, substantially all asset-backed securities	236	240
Total	\$15,943	\$ 19,720

<sup>(1)</sup> These securities are primarily used to satisfy certain international regulatory liquidity requirements.

The gross realized gains and losses on sales of AFS debt securities for the three and six months ended June 30, 2017 and 2016 are presented in the table below.

#### Gains and Losses on Sales of AFS Debt Securities

(Dollars in millions)	Three Months Ended June 30		Six Months Ended June 30	
	2017	2016	2017	2016
Gross gains	\$102	\$254	\$156	\$457
Gross losses	(1 )	(5 )	(3 )	(18 )
Net gains on sales of AFS debt securities	\$101	\$249	\$153	\$439
Income tax expense attributable to realized net gains on sales of AFS debt securities	\$38	\$95	\$58	\$167

The table below presents the fair value and the associated gross unrealized losses on AFS debt securities and whether these securities have had gross unrealized losses for less than 12 months or for 12 months or longer at June 30, 2017 and December 31, 2016.

## Temporarily Impaired and Other-than-temporarily Impaired AFS Debt Securities

(Dollars in millions)	June 30, 2017					
	Less than Twelve Months		Twelve Months or Longer		Total	
	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses
Temporarily impaired AFS debt securities						
Mortgage-backed securities:						
Agency	\$132,527	\$(1,602)	\$3,486	\$(108)	\$136,013	\$(1,710)
Agency-collateralized mortgage obligations	2,275	(14)	1,050	(27)	3,325	(41)
Commercial	7,690	(181)	—	—	7,690	(181)
Non-agency residential	29	(1)	145	(9)	174	(10)
Total mortgage-backed securities	142,521	(1,798)	4,681	(144)	147,202	(1,942)
U.S. Treasury and agency securities	34,992	(622)	39	(1)	35,031	(623)
Non-U.S. securities	—	—	9	(2)	9	(2)
Other taxable securities, substantially all asset-backed securities	47	(1)	634	(4)	681	(5)
Total taxable securities	177,560	(2,421)	5,363	(151)	182,923	(2,572)
Tax-exempt securities	1,152	(58)	1,267	(62)	2,419	(120)
Total temporarily impaired AFS debt securities	178,712	(2,479)	6,630	(213)	185,342	(2,692)
Other-than-temporarily impaired AFS debt securities <sup>(1)</sup>						
Non-agency residential mortgage-backed securities	—	—	84	(7)	84	(7)
Total temporarily impaired and other-than-temporarily impaired AFS debt securities	\$178,712	\$(2,479)	\$6,714	\$(220)	\$185,426	\$(2,699)

## December 31, 2016

Temporarily impaired AFS debt securities						
Mortgage-backed securities:						
Agency	\$135,210	\$(1,846)	\$3,770	\$(117)	\$138,980	\$(1,963)
Agency-collateralized mortgage obligations	3,229	(25)	1,028	(26)	4,257	(51)
Commercial	9,018	(293)	—	—	9,018	(293)
Non-agency residential	212	(1)	204	(13)	416	(14)
Total mortgage-backed securities	147,669	(2,165)	5,002	(156)	152,671	(2,321)
U.S. Treasury and agency securities	28,462	(752)	—	—	28,462	(752)
Non-U.S. securities	52	(1)	142	(2)	194	(3)
Other taxable securities, substantially all asset-backed securities	762	(5)	1,438	(18)	2,200	(23)
Total taxable securities	176,945	(2,923)	6,582	(176)	183,527	(3,099)
Tax-exempt securities	4,782	(148)	1,873	(36)	6,655	(184)
Total temporarily impaired AFS debt securities	181,727	(3,071)	8,455	(212)	190,182	(3,283)
Other-than-temporarily impaired AFS debt securities <sup>(1)</sup>						

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Non-agency residential mortgage-backed securities	94	(1	)	401	(16	)	495	(17	)
Total temporarily impaired and other-than-temporarily impaired AFS debt securities	\$181,821	\$ (3,072	)	\$8,856	\$ (228	)	\$190,677	\$ (3,300	)

(1) Includes other-than-temporary impairment (OTTI) AFS debt securities on which an OTTI loss, primarily related to changes in interest rates, remains in accumulated OCI.



The Corporation recorded OTTI losses on AFS debt securities for the three and six months ended June 30, 2017 and 2016 as presented in the table below. Substantially all OTTI losses in the three and six months ended June 30, 2017 and 2016 consisted of credit losses on non-agency residential mortgage-backed securities (RMBS) and were recorded in other income in the Consolidated Statement of Income.

#### Net Credit-related Impairment Losses Recognized in Earnings

	Three Months Ended June 30		Six Months Ended June 30	
	2017	2016	2017	2016
(Dollars in millions)				
Total OTTI losses	\$(12)	\$(15)	\$(39)	\$(31)
Less: non-credit portion of total OTTI losses recognized in OCI	6	10	6	19
Net credit-related impairment losses recognized in earnings	\$(6 )	\$(5 )	\$(33)	\$(12)

The table below presents a rollforward of the credit losses recognized in earnings for the three and six months ended June 30, 2017 and 2016 on AFS debt securities that the Corporation does not have the intent to sell or will not more-likely-than-not be required to sell.

#### Rollforward of OTTI Credit Losses Recognized

	Three Months Ended June 30		Six Months Ended June 30	
	2017	2016	2017	2016
(Dollars in millions)				
Balance, beginning of period	\$279	\$269	\$253	\$266
Additions for credit losses recognized on AFS debt securities that had no previous impairment losses	5	1	9	2
Additions for credit losses recognized on AFS debt securities that had previously incurred impairment losses	1	4	23	10
Reductions for AFS debt securities matured, sold or intended to be sold	(1 )	(28 )	(1 )	(32 )
Balance, June 30	\$284	\$246	\$284	\$246

The Corporation estimates the portion of a loss on a security that is attributable to credit using a discounted cash flow model and estimates the expected cash flows of the underlying collateral using internal credit, interest rate and prepayment risk models that incorporate management's best estimate of current key assumptions such as default rates, loss severity and prepayment rates. Assumptions used for the underlying loans that support the MBS can vary widely from loan to loan and are influenced by such factors as loan interest rate, geographic location of the borrower, borrower characteristics and collateral type. Based on these assumptions, the Corporation then determines how the underlying collateral cash flows will be distributed to each MBS issued from the applicable special purpose entity. Expected principal and interest cash flows on an impaired AFS debt security are discounted using the effective yield of each individual impaired AFS debt security.

Significant assumptions used in estimating the expected cash flows for measuring credit losses on non-agency RMBS were as follows at June 30, 2017.

#### Significant Assumptions

Range <sup>(1)</sup>  
10th 90th

	Weighted- average	Percentile (2)	Percentile (2)
Prepayment speed	11.5 %	2.9%	20.0 %
Loss severity	20.3	9.2	37.4
Life default rate	22.0	1.2	79.2

(1) Represents the range of inputs/assumptions based upon the underlying collateral.

(2) The value of a variable below which the indicated percentile of observations will fall.

Annual constant prepayment speed and loss severity rates are projected considering collateral characteristics such as loan-to-value (LTV), creditworthiness of borrowers as measured using Fair Isaac Corporation (FICO) scores, and geographic concentrations. The weighted-average severity by collateral type was 17.2 percent for prime, 18.9 percent for Alt-A and 30.4 percent for subprime at June 30, 2017. Additionally, default rates are projected by considering collateral characteristics including, but not limited to, LTV, FICO and geographic concentration. Weighted-average life default rates by collateral type were 15.8 percent for prime, 22.8 percent for Alt-A and 23.0 percent for subprime at June 30, 2017.

The remaining contractual maturity distribution and yields of the Corporation's debt securities carried at fair value and HTM debt securities at June 30, 2017 are summarized in the table below. Actual duration and yields may differ as prepayments on the loans underlying the mortgages or other asset-backed securities (ABS) are passed through to the Corporation.

Maturities of Debt Securities Carried at Fair Value and Held-to-maturity Debt Securities

	June 30, 2017									
	Due in One Year or Less		Due after One Year through Five Years		Due after Five Years through Ten Years		Due after Ten Years		Total	
(Dollars in millions)	Amount	Yield <sup>(1)</sup>	Amount	Yield <sup>(1)</sup>	Amount	Yield <sup>(1)</sup>	Amount	Yield <sup>(1)</sup>	Amount	Yield <sup>(1)</sup>
Amortized cost of debt securities carried at fair value										
Mortgage-backed securities:										
Agency	\$3	4.67 %	\$42	3.73 %	\$641	2.57 %	\$192,536	3.23 %	\$193,222	3.23 %
Agency-collateralized mortgage obligations	—	—	—	—	—	—	7,445	3.18	7,445	3.18
Commercial	48	7.64	485	1.90	11,529	2.44	512	2.71	12,574	2.45
Non-agency residential	—	—	—	—	28	0.01	4,527	8.75	4,555	8.70
Total mortgage-backed securities	51	7.47	527	2.05	12,198	2.44	205,020	3.35	217,796	3.30
U.S. Treasury and agency securities	718	0.64	25,714	1.51	25,404	1.88	67	5.09	51,903	1.69
Non-U.S. securities	17,221	0.48	1,755	1.36	88	1.17	194	6.65	19,258	0.62
Other taxable securities, substantially all asset-backed securities	2,447	2.37	4,008	2.37	1,514	3.00	1,229	3.26	9,198	2.59
Total taxable securities	20,437	0.73	32,004	1.62	39,204	2.10	206,510	3.35	298,155	2.82
Tax-exempt securities	536	1.75	6,577	1.81	9,076	1.70	2,287	1.83	18,476	1.76
Total amortized cost of debt securities carried at fair value	\$20,973	0.75	\$38,581	1.65	\$48,280	2.02	\$208,797	3.34	\$316,631	2.76
Amortized cost of HTM debt securities <sup>(2)</sup>	\$—	—	\$22	3.79	\$928	2.39	\$118,058	3.02	\$119,008	3.02
Debt securities carried at fair value										
Mortgage-backed securities:										
Agency	\$3		\$43		\$646		\$191,482		\$192,174	
Agency-collateralized mortgage obligations	—		—		—		7,489		7,489	
Commercial	48		486		11,407		500		12,441	
Non-agency residential	—		—		37		4,914		4,951	
Total mortgage-backed securities	51		529		12,090		204,385		217,055	

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U.S. Treasury and agency securities	719	25,537	25,097	70	51,423
Non-U.S. securities	17,218	1,703	146	200	19,267
Other taxable securities, substantially all asset-backed securities	2,449	3,998	1,538	1,302	9,287
Total taxable securities	20,437	31,767	38,871	205,957	297,032
Tax-exempt securities	536	6,587	9,069	2,285	18,477
Total debt securities carried at fair value	\$20,973	\$38,354	\$47,940	\$208,242	\$315,509
Fair value of HTM debt securities <sup>(2)</sup>	\$—	\$22	\$901	\$116,407	\$117,330

The average yield is computed based on a constant effective interest rate over the contractual life of each security.

(1) The average yield considers the contractual coupon and the amortization of premiums and accretion of discounts, excluding the effect of related hedging derivatives.

(2) Substantially all U.S. agency MBS.

## NOTE 4 Outstanding Loans and Leases

The following tables present total outstanding loans and leases and an aging analysis for the Consumer Real Estate, Credit Card and Other Consumer, and Commercial portfolio segments, by class of financing receivables, at June 30, 2017 and December 31, 2016.

During the second quarter of 2017, the Corporation completed the sale of its non-U.S. consumer credit card business. This

business, which at December 31, 2016 included \$9.2 billion of non-U.S. credit card loans and the related allowance for loan and lease losses of \$243 million, was presented in assets of business held for sale on the Consolidated Balance Sheet. In this Note, all applicable amounts for December 31, 2016 include these balances, unless otherwise noted. For additional information, see Note 1 – Summary of Significant Accounting Principles.

(Dollars in millions)	June 30, 2017						Loans Accounted for Under the Fair Value Option	Total Outstandings
	30-59 Days Past Due (1)	60-89 Days Past Due (1)	90 Days or More Past Due (2)	Total Past Due 30 Days or More	Total Current or Less Than 30 Days Past Due (3)	Purchased Credit-impaired (4)		
Consumer real estate								
Core portfolio								
Residential mortgage	\$995	\$264	\$1,029	\$2,288	\$163,921			\$166,209
Home equity	202	105	427	734	45,908			46,642
Non-core portfolio								
Residential mortgage (5)	1,073	519	4,113	5,705	16,258	\$ 9,274		31,237
Home equity	234	120	677	1,031	11,099	3,170		15,300
Credit card and other consumer								
U.S. credit card	465	313	772	1,550	89,226			90,776
Direct/Indirect consumer (6)	238	69	33	340	93,153			93,493
Other consumer (7)	20	5	6	31	2,627			2,658
Total consumer	3,227	1,395	7,057	11,679	422,192	12,444		446,315
Consumer loans accounted for under the fair value option (8)							\$ 1,035	1,035
Total consumer loans and leases	3,227	1,395	7,057	11,679	422,192	12,444	1,035	447,350
Commercial								
U.S. commercial	350	446	361	1,157	276,518			277,675
Commercial real estate (9)	24	10	50	84	59,093			59,177
Commercial lease financing	54	72	27	153	21,675			21,828
Non-U.S. commercial	121	74	—	195	90,591			90,786
U.S. small business commercial	52	34	80	166	13,394			13,560
Total commercial	601	636	518	1,755	461,271		6,290	463,026
								6,290

Commercial loans  
accounted for under  
the fair value option <sup>(8)</sup>

Total commercial loans and leases	601	636	518	1,755	461,271		6,290	469,316	
Total loans and leases <sup>(10)</sup>	\$3,828	\$2,031	\$7,575	\$13,434	\$883,463	\$12,444	\$7,325	\$916,666	
Percentage of outstandings	0.42	% 0.22	% 0.83	% 1.47	% 96.38	% 1.35	% 0.80	% 100.00	%

Consumer real estate loans 30-59 days past due includes fully-insured loans of \$837 million and nonperforming  
<sup>(1)</sup> loans of \$250 million. Consumer real estate loans 60-89 days past due includes fully-insured loans of \$435 million  
and nonperforming loans of \$203 million.

<sup>(2)</sup> Consumer real estate includes fully-insured loans of \$3.7 billion.

<sup>(3)</sup> Consumer real estate includes \$2.3 billion and direct/indirect consumer includes \$18 million of nonperforming  
loans.

<sup>(4)</sup> Purchased credit-impaired (PCI) loan amounts are shown gross of the valuation allowance.

<sup>(5)</sup> Total outstandings includes pay option loans of \$1.6 billion. The Corporation no longer originates this product.

Total outstandings includes auto and specialty lending loans of \$49.1 billion, unsecured consumer lending loans of  
<sup>(6)</sup> \$509 million, U.S. securities-based lending loans of \$39.8 billion, non-U.S. consumer loans of \$2.9 billion, student  
loans of \$463 million and other consumer loans of \$657 million.

<sup>(7)</sup> Total outstandings includes consumer finance loans of \$420 million, consumer leases of \$2.1 billion and consumer  
overdrafts of \$155 million.

Consumer loans accounted for under the fair value option were residential mortgage loans of \$666 million and  
<sup>(8)</sup> home equity loans of \$369 million. Commercial loans accounted for under the fair value option were U.S.  
commercial loans of \$3.2 billion and non-U.S. commercial loans of \$3.1 billion. For additional information, see  
Note 14 – Fair Value Measurements and Note 15 – Fair Value Option.

<sup>(9)</sup> Total outstandings includes U.S. commercial real estate loans of \$55.6 billion and non-U.S. commercial real estate  
loans of \$3.6 billion.

The Corporation pledged \$152.8 billion of loans to secure potential borrowing capacity with the Federal Reserve  
<sup>(10)</sup> Bank and Federal Home Loan Bank (FHLB). This amount is not included in the parenthetical disclosure of loans  
and leases pledged as collateral on the Consolidated Balance Sheet as there were no related outstanding  
borrowings.

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December 31, 2016

(Dollars in millions)	30-59 Days Past Due (1)	60-89 Days Past Due (1)	90 Days or More Past Due (2)	Total Past Due 30 Days or More	Total Current or Less Than 30 Days Past Due (3)	Purchased Credit-impaired (4)	Loans Accounted for Under the Fair Value Option	Total Outstandings
Consumer real estate								
Core portfolio								
Residential mortgage	\$1,340	\$425	\$1,213	\$2,978	\$153,519			\$156,497
Home equity	239	105	451	795	48,578			49,373
Non-core portfolio								
Residential mortgage (5)	1,338	674	5,343	7,355	17,818	\$10,127		35,300
Home equity	260	136	832	1,228	12,231	3,611		17,070
Credit card and other consumer								
U.S. credit card	472	341	782	1,595	90,683			92,278
Non-U.S. credit card	37	27	66	130	9,084			9,214
Direct/Indirect consumer (6)	272	79	34	385	93,704			94,089
Other consumer (7)	26	8	6	40	2,459			2,499
Total consumer	3,984	1,795	8,727	14,506	428,076	13,738		456,320
Consumer loans accounted for under the fair value option (8)							\$1,051	1,051
Total consumer loans and leases	3,984	1,795	8,727	14,506	428,076	13,738	1,051	457,371
Commercial								
U.S. commercial	952	263	400	1,615	268,757			270,372
Commercial real estate (9)	20	10	56	86	57,269			57,355
Commercial lease financing	167	21	27	215	22,160			22,375
Non-U.S. commercial	348	4	5	357	89,040			89,397
U.S. small business commercial	96	49	84	229	12,764			12,993
Total commercial	1,583	347	572	2,502	449,990			452,492
Commercial loans accounted for under the fair value option (8)							6,034	6,034
Total commercial loans and leases	1,583	347	572	2,502	449,990		6,034	458,526
Total consumer and commercial loans and leases (10)	\$5,567	\$2,142	\$9,299	\$17,008	\$878,066	\$13,738	\$7,085	\$915,897
Less: Loans of business held for sale (10)								(9,214 )

Total loans and leases (11) \$ 906,683

Percentage of  
outstandings (10) 0.61 % 0.23 % 1.02 % 1.86 % 95.87 % 1.50 % 0.77 % 100.00 %

Consumer real estate loans 30-59 days past due includes fully-insured loans of \$1.1 billion and nonperforming (1) loans of \$266 million. Consumer real estate loans 60-89 days past due includes fully-insured loans of \$547 million and nonperforming loans of \$216 million.

(2) Consumer real estate includes fully-insured loans of \$4.8 billion.

(3) Consumer real estate includes \$2.5 billion and direct/indirect consumer includes \$27 million of nonperforming loans.

(4) PCI loan amounts are shown gross of the valuation allowance.

(5) Total outstandings includes pay option loans of \$1.8 billion. The Corporation no longer originates this product.

(6) Total outstandings includes auto and specialty lending loans of \$48.9 billion, unsecured consumer lending loans of \$585 million, U.S. securities-based lending loans of \$40.1 billion, non-U.S. consumer loans of \$3.0 billion, student loans of \$497 million and other consumer loans of \$1.1 billion.

(7) Total outstandings includes consumer finance loans of \$465 million, consumer leases of \$1.9 billion and consumer overdrafts of \$157 million.

(8) Consumer loans accounted for under the fair value option were residential mortgage loans of \$710 million and home equity loans of \$341 million. Commercial loans accounted for under the fair value option were U.S. commercial loans of \$2.9 billion and non-U.S. commercial loans of \$3.1 billion. For more information, see Note 14 – Fair Value Measurements and Note 15 – Fair Value Option.

(9) Total outstandings includes U.S. commercial real estate loans of \$54.3 billion and non-U.S. commercial real estate loans of \$3.1 billion.

(10) Includes non-U.S. credit card loans, which are included in assets of business held for sale on the Consolidated Balance Sheet.

The Corporation pledged \$143.1 billion of loans to secure potential borrowing capacity with the Federal Reserve

(11) Bank and FHLB. This amount is not included in the parenthetical disclosure of loans and leases pledged as collateral on the Consolidated Balance Sheet as there were no related outstanding borrowings.

The Corporation categorizes consumer real estate loans as core and non-core based on loan and customer characteristics such as origination date, product type, LTV, FICO score and delinquency status consistent with its current consumer and mortgage servicing strategy. Generally, loans that were originated after January 1, 2010, qualified under government-sponsored enterprise (GSE) underwriting guidelines, or otherwise met the Corporation's underwriting guidelines in place in 2015 are characterized as core loans. Loans held in legacy private-label securitizations, government-insured loans originated prior to 2010, loan products no longer originated, and loans originated prior to 2010 and classified as nonperforming or modified in a troubled debt restructuring (TDR) prior to 2016 are generally characterized as non-core loans, and are principally run-off portfolios.

The Corporation has entered into long-term credit protection agreements with FNMA and FHLMC on loans totaling \$6.6 billion

and \$6.4 billion at June 30, 2017 and December 31, 2016, providing full credit protection on residential mortgage loans that become severely delinquent. All of these loans are individually insured and therefore the Corporation does not record an allowance for credit losses related to these loans.

#### Nonperforming Loans and Leases

The Corporation classifies junior-lien home equity loans as nonperforming when the first-lien loan becomes 90 days past due even if the junior-lien loan is performing. At June 30, 2017 and December 31, 2016, \$374 million and \$428 million of such junior-lien home equity loans were included in nonperforming loans.

The Corporation classifies consumer real estate loans that have been discharged in Chapter 7 bankruptcy and not reaffirmed by the borrower as TDRs, irrespective of payment history or delinquency status, even if the repayment terms for the loan have not been otherwise modified. The Corporation continues to have





a lien on the underlying collateral. At June 30, 2017, nonperforming loans discharged in Chapter 7 bankruptcy with no change in repayment terms were \$451 million of which \$274 million were current on their contractual payments, while \$147 million were 90 days or more past due. Of the contractually current nonperforming loans, approximately 81 percent were discharged in Chapter 7 bankruptcy over 12 months ago, and approximately 71 percent were discharged 24 months or more ago.

During the three and six months ended June 30, 2017, the Corporation sold nonperforming and other delinquent consumer real estate loans with a carrying value of \$323 million and \$465 million, including \$204 million of PCI loans for both periods, compared to \$417 million and \$1.4 billion, including \$150 million and \$324 million of PCI loans, for the same periods in 2016.

During the six months ended June 30, 2017, the Corporation transferred nonperforming loans with a net carrying value of \$198 million to held-for-sale. There were no transfers of nonperforming loans to held-for-sale for the same period in 2016.

The table below presents the Corporation's nonperforming loans and leases including nonperforming TDRs, and loans accruing past due 90 days or more at June 30, 2017 and December 31, 2016. Nonperforming loans held-for-sale (LHFS) are excluded from nonperforming loans and leases as they are recorded at either fair value or the lower of cost or fair value. For more information on the criteria for classification as nonperforming, see Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.

#### Credit Quality

(Dollars in millions)	Nonperforming Loans and Leases		Accruing Past Due 90 Days or More	
	June 30	December 31	June 30	December 31
	2017	2016	2017	2016
Consumer real estate				
Core portfolio				
Residential mortgage <sup>(1)</sup>	\$1,051	\$ 1,274	\$398	\$ 486
Home equity	970	969	—	—
Non-core portfolio				
Residential mortgage <sup>(1)</sup>	1,528	1,782	3,301	4,307
Home equity	1,711	1,949	—	—
Credit card and other consumer				
U.S. credit card	n/a	n/a	772	782
Non-U.S. credit card	n/a	n/a	—	66
Direct/Indirect consumer	19	28	32	34
Other consumer	3	2	3	4
Total consumer	5,282	6,004	4,506	5,679
Commercial				
U.S. commercial	1,039	1,256	74	106
Commercial real estate	123	72	—	7
Commercial lease financing	28	36	22	19
Non-U.S. commercial	269	279	—	5
U.S. small business commercial	61	60	68	71
Total commercial	1,520	1,703	164	208
Total loans and leases	\$6,802	\$ 7,707	\$4,670	\$ 5,887

<sup>(1)</sup> Residential mortgage loans in the core and non-core portfolios accruing past due 90 days or more are fully-insured loans. At June 30, 2017 and December 31, 2016, residential mortgage includes \$2.4 billion and \$3.0 billion of loans on which interest has been curtailed by the Federal Housing Administration (FHA), and therefore are no

longer accruing interest, although principal is still insured, and \$1.3 billion and \$1.8 billion of loans on which interest is still accruing.

n/a = not applicable

#### Credit Quality Indicators

The Corporation monitors credit quality within its Consumer Real Estate, Credit Card and Other Consumer, and Commercial portfolio segments based on primary credit quality indicators. Within the consumer portfolio segments, the primary credit quality indicators are refreshed LTV and refreshed FICO score. Refreshed LTV measures the carrying value of the loan as a percentage of the value of the property securing the loan, refreshed quarterly. FICO score measures the creditworthiness of the borrower based on the financial obligations of the borrower and the borrower's credit history. FICO scores are typically refreshed quarterly or more frequently. Within the Commercial portfolio segment, loans are evaluated using the internal classifications of pass rated or

reservable criticized as the primary credit quality indicators. In addition to these primary credit quality indicators, the Corporation uses other credit quality indicators for certain types of loans. For more information on the portfolio segments and credit quality indicators, see Note 1 – Summary of Significant Accounting Principles and Note 4 – Outstanding Loans and Leases to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.

The following tables present certain credit quality indicators for the Corporation's Consumer Real Estate, Credit Card and Other Consumer, and Commercial portfolio segments, by class of financing receivables, at June 30, 2017 and December 31, 2016.

Consumer Real Estate – Credit Quality Indicators<sup>(1)</sup>

(Dollars in millions)	June 30, 2017					
	Core Residential Mortgage (2)	Non-core Residential Mortgage (2)	Residential Mortgage PCI (3)	Core Home Equity (2)	Non-core Home Equity (2)	Home Equity PCI
Refreshed LTV (4)						
Less than or equal to 90 percent	\$ 140,898	\$ 13,168	\$ 7,436	\$ 44,878	\$ 8,128	\$ 1,810
Greater than 90 percent but less than or equal to 100 percent	3,640	1,185	839	808	1,392	525
Greater than 100 percent	1,671	1,545	999	956	2,610	835
Fully-insured loans (5)	20,000	6,065	—	—	—	—
Total consumer real estate	\$ 166,209	\$ 21,963	\$ 9,274	\$ 46,642	\$ 12,130	\$ 3,170
Refreshed FICO score						
Less than 620	\$ 2,329	\$ 2,773	\$ 2,361	\$ 1,210	\$ 2,410	\$ 500
Greater than or equal to 620 and less than 680	4,894	2,438	1,998	2,582	2,739	547
Greater than or equal to 680 and less than 740	23,308	4,106	2,756	9,026	2,964	926
Greater than or equal to 740	115,678	6,581	2,159	33,824	4,017	1,197
Fully-insured loans (5)	20,000	6,065	—	—	—	—
Total consumer real estate	\$ 166,209	\$ 21,963	\$ 9,274	\$ 46,642	\$ 12,130	\$ 3,170

(1) Excludes \$1.0 billion of loans accounted for under the fair value option.

(2) Excludes PCI loans.

(3) Includes \$1.4 billion of pay option loans. The Corporation no longer originates this product.

(4) Refreshed LTV percentages for PCI loans are calculated using the carrying value net of the related valuation allowance.

(5) Credit quality indicators are not reported for fully-insured loans as principal repayment is insured.

## Credit Card and Other Consumer – Credit Quality Indicators

(Dollars in millions)	June 30, 2017		
	U.S. Credit Card	Direct/Indirect Consumer	Other Consumer (1)
Refreshed FICO score			
Less than 620	\$ 4,349	\$ 1,550	\$ 169
Greater than or equal to 620 and less than 680	11,993	2,038	217
Greater than or equal to 680 and less than 740	34,147	12,257	425
Greater than or equal to 740	40,287	33,764	1,688
Other internal credit metrics (2, 3)	—	43,884	159
Total credit card and other consumer	\$ 90,776	\$ 93,493	\$ 2,658

(1) At June 30, 2017, 16 percent of the other consumer portfolio was associated with portfolios from certain consumer finance businesses that the Corporation previously exited.

(2) Other internal credit metrics may include delinquency status, geography or other factors.

Direct/indirect consumer includes \$42.8 billion of securities-based lending which is overcollateralized and

(3) therefore has minimal credit risk and \$464 million of loans the Corporation no longer originates, primarily student loans.

 Commercial – Credit Quality Indicators<sup>(1)</sup>

(Dollars in millions)	June 30, 2017		
	U.S.	Commercial	Non-U.S.

	Commercial	Real Estate	Commercial Lease Financing	Commercial	U.S. Small Business Commercial <sup>(2)</sup>
Risk ratings					
Pass rated	\$268,793	\$ 58,538	\$ 21,103	\$ 87,639	\$ 376
Reservable criticized	8,882	639	725	3,147	57
Refreshed FICO score <sup>(3)</sup>					
Less than 620					221
Greater than or equal to 620 and less than 680					623
Greater than or equal to 680 and less than 740					1,863
Greater than or equal to 740					3,593
Other internal credit metrics <sup>(3, 4)</sup>					6,827
Total commercial	\$277,675	\$ 59,177	\$ 21,828	\$ 90,786	\$ 13,560

<sup>(1)</sup> Excludes \$6.3 billion of loans accounted for under the fair value option.

<sup>(2)</sup> U.S. small business commercial includes \$806 million of criticized business card and small business loans which are evaluated using refreshed FICO scores or internal credit metrics, including delinquency status, rather than risk ratings. At June 30, 2017, 99 percent of the balances where internal credit metrics are used was current or less than 30 days past due.

<sup>(3)</sup> Refreshed FICO score and other internal credit metrics are applicable only to the U.S. small business commercial portfolio.

<sup>(4)</sup> Other internal credit metrics may include delinquency status, application scores, geography or other factors.

Consumer Real Estate – Credit Quality Indicators<sup>(1)</sup>

(Dollars in millions)	December 31, 2016					
	Core Residential Mortgage (2)	Non-core Residential Mortgage (2)	Residential Mortgage PCI (3)	Core Home Equity (2)	Non-core Home Equity (2)	Home Equity PCI
Refreshed LTV (4)						
Less than or equal to 90 percent	\$ 129,737	\$ 14,280	\$ 7,811	\$ 47,171	\$ 8,480	\$ 1,942
Greater than 90 percent but less than or equal to 100 percent	3,634	1,446	1,021	1,006	1,668	630
Greater than 100 percent	1,872	1,972	1,295	1,196	3,311	1,039
Fully-insured loans (5)	21,254	7,475	—	—	—	—
Total consumer real estate	\$ 156,497	\$ 25,173	\$ 10,127	\$ 49,373	\$ 13,459	\$ 3,611
Refreshed FICO score						
Less than 620	\$ 2,479	\$ 3,198	\$ 2,741	\$ 1,254	\$ 2,692	\$ 559
Greater than or equal to 620 and less than 680	5,094	2,807	2,241	2,853	3,094	636
Greater than or equal to 680 and less than 740	22,629	4,512	2,916	10,069	3,176	1,069
Greater than or equal to 740	105,041	7,181	2,229	35,197	4,497	1,347
Fully-insured loans (5)	21,254	7,475	—	—	—	—
Total consumer real estate	\$ 156,497	\$ 25,173	\$ 10,127	\$ 49,373	\$ 13,459	\$ 3,611

(1) Excludes \$1.1 billion of loans accounted for under the fair value option.

(2) Excludes PCI loans.

(3) Includes \$1.6 billion of pay option loans. The Corporation no longer originates this product.

(4) Refreshed LTV percentages for PCI loans are calculated using the carrying value net of the related valuation allowance.

(5) Credit quality indicators are not reported for fully-insured loans as principal repayment is insured.

## Credit Card and Other Consumer – Credit Quality Indicators

(Dollars in millions)	December 31, 2016			
	U.S. Credit Card	Non-U.S. Credit Card	Direct/Indirect Consumer	Other Consumer (1)
Refreshed FICO score				
Less than 620	\$ 4,431	\$ —	\$ 1,478	\$ 187
Greater than or equal to 620 and less than 680	12,364	—	2,070	222
Greater than or equal to 680 and less than 740	34,828	—	12,491	404
Greater than or equal to 740	40,655	—	33,420	1,525
Other internal credit metrics (2, 3, 4)	—	9,214	44,630	161
Total credit card and other consumer	\$ 92,278	\$ 9,214	\$ 94,089	\$ 2,499

(1) At December 31, 2016, 19 percent of the other consumer portfolio was associated with portfolios from certain consumer finance businesses that the Corporation previously exited.

(2) Other internal credit metrics may include delinquency status, geography or other factors.

Direct/indirect consumer includes \$43.1 billion of securities-based lending which is overcollateralized and (3) therefore has minimal credit risk and \$499 million of loans the Corporation no longer originates, primarily student loans.

Non-U.S. credit card represents the U.K. credit card portfolio which was evaluated using internal credit metrics,

(4) including delinquency status. At December 31, 2016, 98 percent of this portfolio was current or less than 30 days past due, one percent was 30-89 days past due and one percent was 90 days or more past due.

Commercial – Credit Quality Indicators<sup>(1)</sup>

(Dollars in millions)	December 31, 2016				U.S. Small
	U.S. Commercial	Commercial Real Estate	Commercial Lease Financing	Non-U.S. Commercial	Business Commercial <sup>(2)</sup>
Risk ratings					
Pass rated	\$261,214	\$ 56,957	\$ 21,565	\$ 85,689	\$ 453
Reservable criticized	9,158	398	810	3,708	71
Refreshed FICO score <sup>(3)</sup>					
Less than 620					200
Greater than or equal to 620 and less than 680					591
Greater than or equal to 680 and less than 740					1,741
Greater than or equal to 740					3,264
Other internal credit metrics <sup>(3, 4)</sup>					6,673
Total commercial	\$270,372	\$ 57,355	\$ 22,375	\$ 89,397	\$ 12,993

<sup>(1)</sup> Excludes \$6.0 billion of loans accounted for under the fair value option.

<sup>(2)</sup> U.S. small business commercial includes \$755 million of criticized business card and small business loans which are evaluated using refreshed FICO scores or internal credit metrics, including delinquency status, rather than risk ratings. At December 31, 2016, 98 percent of the balances where internal credit metrics are used was current or less than 30 days past due.

<sup>(3)</sup> Refreshed FICO score and other internal credit metrics are applicable only to the U.S. small business commercial portfolio.

<sup>(4)</sup> Other internal credit metrics may include delinquency status, application scores, geography or other factors.

### Impaired Loans and Troubled Debt Restructurings

A loan is considered impaired when, based on current information, it is probable that the Corporation will be unable to collect all amounts due from the borrower in accordance with the contractual terms of the loan. Impaired loans include nonperforming commercial loans and all consumer and commercial TDRs. Impaired loans exclude nonperforming consumer loans and nonperforming commercial leases unless they are classified as TDRs. Loans accounted for under the fair value option are also excluded. PCI loans are excluded and reported separately on page 101. For more information, see Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.

#### Consumer Real Estate

Impaired consumer real estate loans within the Consumer Real Estate portfolio segment consist entirely of TDRs. Excluding PCI loans, most modifications of consumer real estate loans meet the definition of TDRs when a binding offer is extended to a borrower. For more information on impaired consumer real estate loans, see Note 4 – Outstanding Loans and Leases to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K. Consumer real estate loans that have been discharged in Chapter 7 bankruptcy with no change in repayment terms and not reaffirmed by the borrower of \$1.3 billion were included in TDRs at June 30, 2017, of which \$451 million were classified as nonperforming and \$465 million were loans fully-insured by the

FHA. For more information on loans discharged in Chapter 7 bankruptcy, see Nonperforming Loans and Leases in this Note.

At June 30, 2017 and December 31, 2016, remaining commitments to lend additional funds to debtors whose terms have been modified in a consumer real estate TDR were immaterial. Consumer real estate foreclosed properties totaled \$285 million and \$363 million at June 30, 2017 and December 31, 2016. The carrying value of consumer real estate loans, including fully-insured and PCI loans, for which formal foreclosure proceedings were in process as of June 30, 2017 was \$4.1 billion. During the three and six months ended June 30, 2017, the Corporation reclassified \$226 million and \$426 million of consumer real estate loans to foreclosed properties or, for properties acquired upon foreclosure of certain government-guaranteed loans (principally FHA-insured loans), to other assets. This compared to reclassifications of \$392 million and \$808 million for the same periods in 2016. The reclassifications represent non-cash investing activities and, accordingly, are not reflected on the Consolidated Statement of Cash Flows. The table below provides the unpaid principal balance, carrying value and related allowance at June 30, 2017 and December 31, 2016, and the average carrying value and interest income recognized for the three and six months ended June 30, 2017 and 2016 for impaired loans in the Corporation's Consumer Real Estate portfolio segment. Certain impaired consumer real estate loans do not have a related allowance as the current valuation of these impaired loans exceeded the carrying value, which is net of previously recorded charge-offs.

#### Impaired Loans – Consumer Real Estate

(Dollars in millions)	June 30, 2017			December 31, 2016		
	Unpaid Principal Balance	Carrying Value	Related Allowance	Unpaid Principal Balance	Carrying Value	Related Allowance
With no recorded allowance						
Residential mortgage	\$9,966	\$ 7,696	\$—	\$11,151	\$8,695	\$ —
Home equity	3,692	1,987	—	3,704	1,953	—
With an allowance recorded						
Residential mortgage	\$3,525	\$ 3,424	\$211	\$4,041	\$3,936	\$ 219
Home equity	978	886	170	910	824	137
Total						
Residential mortgage	\$13,491	\$ 11,120	\$211	\$15,192	\$12,631	\$ 219
Home equity	4,670	2,873	170	4,614	2,777	137



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	Three Months Ended June 30				Six Months Ended June 30			
	2017		2016		2017		2016	
	Average Carrying Value	Interest Income Recognized (1)	Average Carrying Value	Interest Income Recognized (1)	Average Carrying Value	Interest Income Recognized (1)	Average Carrying Value	Interest Income Recognized (1)
With no recorded allowance								
Residential mortgage	\$7,886	\$ 81	\$10,345	\$ 100	\$8,192	\$160	\$10,925	\$ 194
Home equity	1,999	28	1,870	17	2,000	55	1,843	30
With an allowance recorded								
Residential mortgage	\$3,647	\$ 33	\$5,387	\$ 46	\$3,723	\$68	\$5,737	\$ 97
Home equity	868	7	873	5	842	12	882	11
Total								
Residential mortgage	\$11,533	\$ 114	\$15,732	\$ 146	\$11,915	\$228	\$16,662	\$ 291
Home equity	2,867	35	2,743	22	2,842	67	2,725	41

Interest income recognized includes interest accrued and collected on the outstanding balances of accruing (1) impaired loans as well as interest cash collections on nonaccruing impaired loans for which the principal is considered collectible.

The table below presents the June 30, 2017 and 2016 unpaid principal balance, carrying value, and average pre- and post-modification interest rates on consumer real estate loans that were modified in TDRs during the three and six months ended June 30, 2017 and 2016, and net charge-offs recorded during the period

in which the modification occurred. The following Consumer Real Estate portfolio segment tables include loans that were initially classified as TDRs during the period and also loans that had previously been classified as TDRs and were modified again during the period.

Consumer Real Estate – TDRs Entered into During the Three Months Ended June 30, 2017 and 2016 <sup>(1)</sup>

(Dollars in millions)	June 30, 2017					Three Months Ended June 30, 2017
	Unpaid Principal Balance	Carrying Value	Pre-Modification Interest Rate	Post-Modification Interest Rate <sup>(2)</sup>		Net Charge-offs <sup>(3)</sup>
Residential mortgage	\$346	\$313	4.50 %	4.37 %		\$ 1
Home equity	250	201	4.11	3.94		11
Total	\$596	\$514	4.33	4.19		\$ 12
	June 30, 2016					Three Months Ended June 30, 2016
Residential mortgage	\$437	\$405	4.68 %	4.42 %		\$ 3
Home equity	250	200	3.81	3.27		16
Total	\$687	\$605	4.36	4.00		\$ 19

Consumer Real Estate – TDRs Entered into During the Six Months Ended June 30, 2017 and 2016 <sup>(1)</sup>

(Dollars in millions)	June 30, 2017					Six Months Ended June 30, 2017
	Unpaid Principal Balance	Carrying Value	Pre-Modification Interest Rate	Post-Modification Interest Rate <sup>(2)</sup>		Net Charge-offs <sup>(3)</sup>
Residential mortgage	\$646	\$581	4.51 %	4.34 %		\$ 3
Home equity	469	365	4.20	3.75		17
Total	\$1,115	\$946	4.38	4.09		\$ 20
	June 30, 2016					Six Months Ended June 30, 2016
Residential mortgage	\$854	\$785	4.72 %	4.45 %		\$ 5
Home equity	460	361	3.63	3.10		26
Total	\$1,314	\$1,146	4.34	3.98		\$ 31

During the three and six months ended June 30, 2017, the Corporation forgave principal of \$0 million and \$0

<sup>(1)</sup> million related to residential mortgage loans in connection with TDRs compared to \$1 million and \$11 million for the same periods in 2016.

<sup>(2)</sup>

The post-modification interest rate reflects the interest rate applicable only to permanently completed modifications, which exclude loans that are in a trial modification period.

- (3) Net charge-offs include amounts recorded on loans modified during the period that are no longer held by the Corporation at June 30, 2017 and 2016 due to sales and other dispositions.

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The table below presents the June 30, 2017 and 2016 carrying value for consumer real estate loans that were modified in a TDR during the three and six months ended June 30, 2017 and 2016 by type of modification.

Consumer Real Estate – Modification Programs

(Dollars in millions)	TDRs Entered into During the Three Months Ended June 30			
	2017		2016	
	Residential Mortgage	Home Equity	Residential Mortgage	Home Equity
Modifications under government programs				
Contractual interest rate reduction	\$9	\$ 2	\$23	\$ 12
Principal and/or interest forbearance	—	1	—	4
Other modifications <sup>(1)</sup>	3	—	8	—
Total modifications under government programs	12	3	31	16
Modifications under proprietary programs				
Contractual interest rate reduction	19	1	14	2
Capitalization of past due amounts	9	—	5	—
Principal and/or interest forbearance	3	—	2	1
Other modifications <sup>(1)</sup>	3	13	9	17
Total modifications under proprietary programs	34	14	30	20
Trial modifications	222	165	300	145
Loans discharged in Chapter 7 bankruptcy <sup>(2)</sup>	45	19	44	19
Total modifications	\$313	\$ 201	\$405	\$ 200

(Dollars in millions)	TDRs Entered into During the Six Months Ended June 30			
	2017		2016	
	Residential Mortgage	Home Equity	Residential Mortgage	Home Equity
Modifications under government programs				
Contractual interest rate reduction	\$33	\$ 5	\$66	\$ 18
Principal and/or interest forbearance	1	2	—	6
Other modifications <sup>(1)</sup>	8	—	19	1
Total modifications under government programs	42	7	85	25
Modifications under proprietary programs				
Contractual interest rate reduction	39	33	32	28
Capitalization of past due amounts	16	5	14	3
Principal and/or interest forbearance	5	4	6	16
Other modifications <sup>(1)</sup>	4	40	11	20
Total modifications under proprietary programs	64	82	63	67
Trial modifications	382	240	540	230
Loans discharged in Chapter 7 bankruptcy <sup>(2)</sup>	93	36	97	39
Total modifications	\$581	\$ 365	\$785	\$ 361

<sup>(1)</sup> Includes other modifications such as term or payment extensions and repayment plans.

<sup>(2)</sup> Includes loans discharged in Chapter 7 bankruptcy with no change in repayment terms that are classified as TDRs.

The table below presents the carrying value of consumer real estate loans that entered into payment default during the three and six months ended June 30, 2017 and 2016 that were modified in a TDR during the 12 months preceding payment default. A payment default for consumer real estate TDRs is recognized when a borrower has missed three monthly payments (not necessarily consecutively) since modification.

Consumer Real Estate – TDRs Entering Payment Default That Were Modified During the Preceding 12 Months

(Dollars in millions)	Three Months Ended June 30			
	2017		2016	
	Residential Mortgage	Home Equity	Residential Mortgage	Home Equity
Modifications under government programs	\$19	\$ 1	\$85	\$ 1
Modifications under proprietary programs	14	19	35	5
Loans discharged in Chapter 7 bankruptcy <sup>(1)</sup>	12	3	31	6
Trial modifications <sup>(2)</sup>	40	6	184	29
Total modifications	\$85	\$ 29	\$335	\$ 41

  

	Six Months Ended June 30			
	2017		2016	
Modifications under government programs	\$44	\$ 2	\$178	\$ 1
Modifications under proprietary programs	30	37	78	27
Loans discharged in Chapter 7 bankruptcy <sup>(1)</sup>	70	7	71	11
Trial modifications <sup>(2)</sup>	235	23	421	66
Total modifications	\$379	\$ 69	\$748	\$ 105

<sup>(1)</sup> Includes loans discharged in Chapter 7 bankruptcy with no change in repayment terms that are classified as TDRs.

<sup>(2)</sup> Includes trial modification offers to which the customer did not respond.

Credit Card and Other Consumer

Impaired loans within the Credit Card and Other Consumer portfolio segment consist entirely of loans that have been modified in TDRs. The Corporation seeks to assist customers that are experiencing financial difficulty by modifying loans while ensuring compliance with federal, local and international laws and guidelines. Credit card and other consumer loan modifications generally involve reducing the interest rate on the account and placing the customer on a fixed payment plan not exceeding 60 months, all of which are considered TDRs. In substantially all cases, the customer's available line of credit is canceled. The Corporation makes loan modifications directly with borrowers for debt held only by the Corporation (internal programs). Additionally, the Corporation

makes loan modifications for borrowers working with third-party renegotiation agencies that provide solutions to customers' entire unsecured debt structures (external programs). The Corporation classifies other secured consumer loans that have been discharged in Chapter 7 bankruptcy as TDRs which are written down to collateral value and placed on nonaccrual status no later than the time of discharge. For more information on the regulatory guidance on loans discharged in Chapter 7 bankruptcy, see Nonperforming Loans and Leases in this Note. On June 1, 2017, the Corporation completed the sale of its non-U.S. consumer credit card business. The following tables for the three and six months ended June 30, 2017 reflect the sale of the non-U.S. credit card portfolio.



The table below provides the unpaid principal balance, carrying value and related allowance at June 30, 2017 and December 31, 2016, and the average carrying value and interest income recognized for the three and six months ended June 30, 2017 and 2016 on TDRs within the Credit Card and Other Consumer portfolio segment.

Impaired Loans – Credit Card and Other Consumer

(Dollars in millions)	June 30, 2017		December 31, 2016			
	Unpaid Principal Balance	Carrying Value <sup>(1)</sup>	Related Allowance	Unpaid Principal Balance	Carrying Value	Related Allowance
With no recorded allowance						
Direct/Indirect consumer	\$43	\$ 18	\$—	\$49	\$22	\$ —
With an allowance recorded						
U.S. credit card	\$452	\$ 458	\$131	\$479	\$485	\$ 128
Non-U.S. credit card	n/a	n/a	n/a	88	100	61
Direct/Indirect consumer	1	2	—	3	3	—
Total						
U.S. credit card	\$452	\$ 458	\$131	\$479	\$485	\$ 128
Non-U.S. credit card	n/a	n/a	n/a	88	100	61
Direct/Indirect consumer	44	20	—	52	25	—

	Three Months Ended June 30				Six Months Ended June 30			
	2017		2016		2017		2016	
	Average Carrying Value <sup>(2)</sup>	Interest Income Recognized	Average Carrying Value <sup>(2)</sup>	Interest Income Recognized	Average Carrying Value <sup>(2)</sup>	Interest Income Recognized	Average Carrying Value <sup>(2)</sup>	Interest Income Recognized
With no recorded allowance								
Direct/Indirect consumer	\$18	\$ —	\$21	\$ —	\$18	\$—	\$21	\$ —
With an allowance recorded								
U.S. credit card	\$463	\$ 6	\$568	\$ 8	\$470	\$12	\$587	\$ 17
Non-U.S. credit card	78	—	116	1	88	1	119	2
Direct/Indirect consumer	2	—	11	—	3	—	15	—
Total								
U.S. credit card	\$463	\$ 6	\$568	\$ 8	\$470	\$12	\$587	\$ 17
Non-U.S. credit card	78	—	116	1	88	1	119	2
Direct/Indirect consumer	20	—	32	—	21	—	36	—

<sup>(1)</sup> Includes accrued interest and fees.

Interest income recognized includes interest accrued and collected on the outstanding balances of accruing

<sup>(2)</sup> impaired loans as well as interest cash collections on nonaccruing impaired loans for which the principal is considered collectible.

n/a = not applicable.

The table below provides information on the Corporation's primary modification programs for the Credit Card and Other Consumer TDR portfolio at June 30, 2017 and December 31, 2016.

Credit Card and Other Consumer – TDRs by Program Type

Internal Programs	External Programs	Other <sup>(1)</sup>	Total	Percent of Balances Current or Less Than 30 Days Past
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(Dollars in millions)	June 30		December 31		June 30		December 31		Due	
	2017	2016	2017	2016	2017	2016	2017	2016	June 30	December 31
U.S. credit card	\$202	\$ 220	\$255	\$ 264	\$1	\$ 1	\$458	\$ 485	89.26%	88.99 %
Non-U.S. credit card	n/a	11	n/a	7	n/a	82	n/a	100	n/a	38.47
Direct/Indirect consumer	1	2	1	1	18	22	20	25	92.99	90.49
Total TDRs by program type	\$203	\$ 233	\$256	\$ 272	\$19	\$ 105	\$478	\$ 610	89.42	80.79

(1) Other TDRs for non-U.S. credit card included modifications of accounts that are ineligible for a fixed payment plan.

n/a = not applicable.



The table below provides information on the Corporation's Credit Card and Other Consumer TDR portfolio including the June 30, 2017 and 2016 unpaid principal balance, carrying value, and average pre- and post-modification interest rates of loans that were modified in TDRs during three and six months ended June 30, 2017 and 2016, and net charge-offs recorded during the period in which the modification occurred.

Credit Card and Other Consumer – TDRs Entered into During the Three Months Ended June 30, 2017 and 2016

(Dollars in millions)	June 30, 2017						Three Months Ended June 30, 2017
	Unpaid Principal Balance	Carrying Value <sup>(1)</sup>	Pre-Modification Interest Rate		Post-Modification Interest Rate		Net Charge-offs
U.S. credit card	\$52	\$ 57	18.31	%	5.30	%	\$ 4
Non-U.S. credit card	—	—	n/a		n/a		6
Direct/Indirect consumer	7	4	4.14		4.08		3
Total	\$59	\$ 61	17.31		5.21		\$ 13

(Dollars in millions)	June 30, 2016						Three Months Ended June 30, 2016
	Unpaid Principal Balance	Carrying Value <sup>(1)</sup>	Pre-Modification Interest Rate		Post-Modification Interest Rate		Net Charge-offs
U.S. credit card	\$44	\$ 47	17.57	%	5.41	%	\$ 3
Non-U.S. credit card	30	36	24.01		0.35		7
Direct/Indirect consumer	7	4	4.52		4.34		3
Total	\$81	\$ 87	19.54		3.30		\$ 13

Credit Card and Other Consumer – TDRs Entered into During the Six Months Ended June 30, 2017 and 2016

(Dollars in millions)	June 30, 2017						Six Months Ended June 30, 2017
	Unpaid Principal Balance	Carrying Value <sup>(1)</sup>	Pre-Modification Interest Rate		Post-Modification Interest Rate		Net Charge-offs
U.S. credit card	\$100	\$ 106	18.19	%	5.32	%	\$ 5
Non-U.S. credit card	—	—	n/a		n/a		7
Direct/Indirect consumer	11	6	4.12		4.04		7
Total	\$111	\$ 112	17.39		5.24		\$ 19

(Dollars in millions)	June 30, 2016						Six Months Ended June 30, 2016
	Unpaid Principal Balance	Carrying Value <sup>(1)</sup>	Pre-Modification Interest Rate		Post-Modification Interest Rate		Net Charge-offs
U.S. credit card	\$87	\$ 93	17.47	%	5.47	%	\$ 4
Non-U.S. credit card	53	62	23.80		0.37		8
Direct/Indirect consumer	12	7	4.50		4.29		5
Total	\$152	\$ 162	19.30		3.47		\$ 17

<sup>(1)</sup> Includes accrued interest and fees.

n/a = not applicable

Credit card and other consumer loans are deemed to be in payment default during the quarter in which a borrower misses the second of two consecutive payments. Payment defaults are one of the factors considered when projecting future cash flows in the calculation of the allowance for loan and lease losses for impaired credit card and other consumer loans. Based on historical experience, the Corporation estimates that 12 percent of new U.S. credit card TDRs and 13 percent of new direct/indirect consumer TDRs may be in payment default within 12 months after modification. Loans that entered into payment default during the three and six months ended June 30, 2017 that had been modified in a TDR during the preceding 12 months were \$5 million and \$12 million for U.S. credit card and \$1 million and \$2 million for direct/indirect consumer. During the three and six months ended June 30, 2016, loans that entered into payment default that had been modified in a TDR during the preceding 12 months were \$7 million

and \$16 million for U.S. credit card, \$30 million and \$64 million for non-U.S. credit card, and \$1 million and \$2 million for direct/indirect consumer.

#### Commercial Loans

Impaired commercial loans include nonperforming loans and TDRs (both performing and nonperforming). For more information on impaired commercial loans, see Note 4 – Outstanding Loans and Leases to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.

At June 30, 2017 and December 31, 2016, remaining commitments to lend additional funds to debtors whose terms have been modified in a commercial loan TDR were \$455 million and \$461 million.

Commercial foreclosed properties totaled \$40 million and \$14 million at June 30, 2017 and December 31, 2016.

The table below provides the unpaid principal balance, carrying value and related allowance at June 30, 2017 and December 31, 2016, and the average carrying value and interest income recognized for the three and six months ended June 30, 2017 and 2016 for impaired loans in the Corporation's Commercial loan portfolio segment. Certain impaired commercial loans do not have a related allowance as the valuation of these impaired loans exceeded the carrying value, which is net of previously recorded charge-offs.

## Impaired Loans – Commercial

(Dollars in millions)	June 30, 2017		Related Allowance	December 31, 2016				
	Unpaid Principal Balance	Carrying Value		Unpaid Principal Balance	Carrying Value	Related Allowance		
With no recorded allowance								
U.S. commercial	\$785	\$ 777	\$—	\$860	\$827	\$ —		
Commercial real estate	53	47	—	77	71	—		
Non-U.S. commercial	—	—	—	130	130	—		
With an allowance recorded								
U.S. commercial	\$1,550	\$ 1,215	\$ 103	\$2,018	\$1,569	\$ 132		
Commercial real estate	239	115	13	243	96	10		
Commercial lease financing	9	7	1	6	4	—		
Non-U.S. commercial	557	476	96	545	432	104		
U.S. small business commercial <sup>(1)</sup>	88	75	29	85	73	27		
Total								
U.S. commercial	\$2,335	\$ 1,992	\$ 103	\$2,878	\$2,396	\$ 132		
Commercial real estate	292	162	13	320	167	10		
Commercial lease financing	9	7	1	6	4	—		
Non-U.S. commercial	557	476	96	675	562	104		
U.S. small business commercial <sup>(1)</sup>	88	75	29	85	73	27		
	Three Months Ended June 30			Six Months Ended June 30				
	2017	2016		2017	2016			
	Average Carrying Value	Average Carrying Value		Average Carrying Value	Average Carrying Value			
	Interest Income Recognized <sup>(2)</sup>	Interest Income Recognized <sup>(2)</sup>		Interest Income Recognized <sup>(2)</sup>	Interest Income Recognized <sup>(2)</sup>			
With no recorded allowance								
U.S. commercial	\$857	\$ 3	\$656	\$ 3	\$870	\$6	\$619	\$ 5
Commercial real estate	48	—	65	—	54	—	71	—
Non-U.S. commercial	43	—	17	—	75	—	11	—
With an allowance recorded								
U.S. commercial	\$1,264	\$ 7	\$1,646	\$ 16	\$1,376	\$16	\$1,544	\$ 30
Commercial real estate	106	1	96	1	91	2	100	2
Commercial lease financing	4	—	1	—	4	—	1	—
Non-U.S. commercial	482	3	349	3	469	6	359	6
U.S. small business commercial <sup>(1)</sup>	77	—	92	—	75	—	97	—
Total								
U.S. commercial	\$2,121	\$ 10	\$2,302	\$ 19	\$2,246	\$22	\$2,163	\$ 35
Commercial real estate	154	1	161	1	145	2	171	2
Commercial lease financing	4	—	1	—	4	—	1	—
Non-U.S. commercial	525	3	366	3	544	6	370	6

U.S. small business commercial <sup>(1)</sup> 77 — 92 — 75 — 97 —

<sup>(1)</sup> Includes U.S. small business commercial renegotiated TDR loans and related allowance.

Interest income recognized includes interest accrued and collected on the outstanding balances of accruing  
<sup>(2)</sup> impaired loans as well as interest cash collections on nonaccruing impaired loans for which the principal is considered collectible.

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The table below presents the June 30, 2017 and 2016 unpaid principal balance and carrying value of commercial loans that were modified as TDRs during the three and six months ended June 30, 2017 and 2016, and net charge-offs that were recorded during the period in which the modification occurred. The table below includes loans that were initially classified as TDRs during the period and also loans that had previously been classified as TDRs and were modified again during the period.

Commercial – TDRs Entered into During the Three Months Ended  
June 30, 2017 and 2016

(Dollars in millions)	June 30, 2017		Three Months Ended June 30, 2017
	Unpaid Principal Balance	Carrying Value	Net Charge-offs
U.S. commercial	\$405	\$ 393	\$ 14
Commercial real estate	44	37	7
U.S. small business commercial <sup>(1)</sup>	7	7	—
Total	\$456	\$ 437	\$ 21

(Dollars in millions)	June 30, 2016		Three Months Ended June 30, 2016
	Unpaid Principal Balance	Carrying Value	Net Charge-offs
U.S. commercial	\$873	\$ 849	\$ 24
Commercial real estate	12	12	—
Commercial lease financing	5	2	2
Non-U.S. commercial	115	99	12
U.S. small business commercial <sup>(1)</sup>	2	2	—
Total	\$1,007	\$ 964	\$ 38

Commercial – TDRs Entered into During the Six Months Ended  
June 30, 2017 and 2016

(Dollars in millions)	June 30, 2017		Six Months Ended June 30, 2017
	Unpaid Principal Balance	Carrying Value	Net Charge-offs
U.S. commercial	\$687	\$ 648	\$ 55
Commercial real estate	59	46	7
U.S. small business commercial <sup>(1)</sup>	9	10	—
Total	\$755	\$ 704	\$ 62

  

(Dollars in millions)	June 30, 2016		Six Months Ended June
	Unpaid Principal Balance	Carrying Value	Net Charge-offs

	30, 2016		
U.S. commercial	\$ 1,341	\$ 1,299	\$ 29
Commercial real estate	22	22	1
Commercial lease financing	5	2	2
Non-U.S. commercial	287	207	48
U.S. small business commercial <sup>(1)</sup>	3	3	—
Total	\$ 1,658	\$ 1,533	\$ 80

<sup>(1)</sup> U.S. small business commercial TDRs are comprised of renegotiated small business card loans.

A commercial TDR is generally deemed to be in payment default when the loan is 90 days or more past due, including delinquencies that were not resolved as part of the modification. U.S. small business commercial TDRs are deemed to be in payment default

during the quarter in which a borrower misses the second of two consecutive payments. Payment defaults are one of the factors considered when projecting future cash flows, along with observable market prices or fair value of collateral when measuring the allowance for loan and lease losses. TDRs that were in payment default had a carrying value of \$78 million and \$90 million for U.S. commercial and \$32 million and \$17 million for commercial real estate at June 30, 2017 and 2016.

#### Purchased Credit-impaired Loans

The table below shows activity for the accretable yield on PCI loans, which include the Countrywide Financial Corporation (Countrywide) portfolio and loans repurchased in connection with the 2013 settlement with FNMA. The amount of accretable yield is affected by changes in credit outlooks, including metrics such as default rates and loss severities, prepayment speeds, which can change the amount and period of time over which interest payments are expected to be received, and the interest rates on variable rate loans. The reclassifications from nonaccretable difference in the three and six months ended June 30, 2017 were primarily due to an increase in the expected principal and interest cash flows due to lower default estimates.

#### Rollforward of Accretable Yield

(Dollars in millions)	Three	Six
	Months	Months
	Ended	Ended
	June 30,	June 30,
	2017	2017
Accretable yield, beginning of period	\$ 3,550	\$ 3,805
Accretion	(155 )	(318 )
Disposals/transfers	(148 )	(239 )
Reclassifications from nonaccretable difference	41	40
Accretable yield, June 30, 2017	\$ 3,288	\$ 3,288

During the three and six months ended June 30, 2017, the Corporation sold PCI loans with a carrying value of \$189 million, which excludes the related allowance of \$15 million. During the three and six months ended June 30, 2016, the Corporation sold PCI loans with a carrying value of \$150 million and \$324 million, which excludes the related allowance of \$19 million and \$39 million. For more information on PCI loans, see Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K, and for the carrying value and valuation allowance for PCI loans, see Note 5 – Allowance for Credit Losses.

#### Loans Held-for-sale

The Corporation had LHFS of \$5.9 billion and \$9.1 billion at June 30, 2017 and December 31, 2016. Cash and non-cash proceeds from sales and paydowns of loans originally classified as LHFS were \$21.1 billion and \$12.8 billion for the six months ended June 30, 2017 and 2016. Cash used for originations and purchases of LHFS totaled \$18.1 billion and \$13.4 billion for the six months ended June 30, 2017 and 2016.

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## NOTE 5 Allowance for Credit Losses

The table below summarizes the changes in the allowance for credit losses by portfolio segment for the three and six months ended June 30, 2017 and 2016.

(Dollars in millions)	Three Months Ended June 30, 2017			
	Consumer Real Estate	Credit Card and Other Consumer	Commercial	Total Allowance
Allowance for loan and lease losses, April 1	\$2,565	\$ 3,329	\$ 5,218	\$ 11,112
Loans and leases charged off	(198 )	(954 )	(198 )	(1,350 )
Recoveries of loans and leases previously charged off	167	234	41	442
Net charge-offs	(31 )	(720 )	(157 )	(908 )
Write-offs of PCI loans	(55 )	—	—	(55 )
Provision for loan and lease losses	(170 )	776	120	726
Other <sup>(1)</sup>	—	1	(1 )	—
Allowance for loan and lease losses, June 30	2,309	3,386	5,180	10,875
Reserve for unfunded lending commitments, April 1	—	—	757	757
Provision for unfunded lending commitments	—	—	—	—
Reserve for unfunded lending commitments, June 30	—	—	757	757
Allowance for credit losses, June 30	\$2,309	\$ 3,386	\$ 5,937	\$ 11,632
	Three Months Ended June 30, 2016			
Allowance for loan and lease losses, April 1	\$3,456	\$3,302	\$5,311	\$12,069
Loans and leases charged off	(304 )	(884 )	(190 )	(1,378 )
Recoveries of loans and leases previously charged off	144	195	54	393
Net charge-offs	(160 )	(689 )	(136 )	(985 )
Write-offs of PCI loans	(82 )	—	—	(82 )
Provision for loan and lease losses	(5 )	738	219	952
Other <sup>(1)</sup>	—	(17 )	(100 )	(117 )
Allowance for loan and lease losses, June 30	3,209	3,334	5,294	11,837
Reserve for unfunded lending commitments, April 1	—	—	627	627
Provision for unfunded lending commitments	—	—	24	24
Other <sup>(1)</sup>	—	—	99	99
Reserve for unfunded lending commitments, June 30	—	—	750	750
Allowance for credit losses, June 30	\$3,209	\$3,334	\$6,044	\$12,587
	Six Months Ended June 30, 2017			
Allowance for loan and lease losses, January 1	\$2,750	\$3,229	\$5,258	\$11,237
Loans and leases charged off	(402 )	(1,900 )	(358 )	(2,660 )
Recoveries of loans and leases previously charged off	290	434	94	818
Net charge-offs <sup>(2)</sup>	(112 )	(1,466 )	(264 )	(1,842 )
Write-offs of PCI loans	(88 )	—	—	(88 )
Provision for loan and lease losses	(241 )	1,619	188	1,566
Other <sup>(1)</sup>	—	4	(2 )	2
Allowance for loan and lease losses, June 30	2,309	3,386	5,180	10,875
Reserve for unfunded lending commitments, January 1	—	—	762	762
Provision for unfunded lending commitments	—	—	(5 )	(5 )
Reserve for unfunded lending commitments, June 30	—	—	757	757
Allowance for credit losses, June 30	\$2,309	\$3,386	\$5,937	\$11,632
	Six Months Ended June 30, 2016			
Allowance for loan and lease losses, January 1	\$3,914	\$3,471	\$4,849	\$12,234



Loans and leases charged off	(682 )	(1,796 )	(396 )	(2,874 )
Recoveries of loans and leases previously charged off	319	393	109	821
Net charge-offs	(363 )	(1,403 )	(287 )	(2,053 )
Write-offs of PCI loans	(187 )	—	—	(187 )
Provision for loan and lease losses	(155 )	1,290	833	1,968
Other <sup>(1)</sup>	—	(24 )	(101 )	(125 )
Allowance for loan and lease losses, June 30	3,209	3,334	5,294	11,837
Reserve for unfunded lending commitments, January 1	—	—	646	646
Provision for unfunded lending commitments	—	—	5	5
Other <sup>(1)</sup>	—	—	99	99
Reserve for unfunded lending commitments, June 30	—	—	750	750
Allowance for credit losses, June 30	\$3,209	\$3,334	\$6,044	\$12,587

(1) Primarily represents the net impact of portfolio sales, consolidations and deconsolidations, foreign currency translation adjustments and certain other reclassifications.

(2) Includes net charge-offs of non-U.S. credit card loans, which were previously included in assets of business held for sale. On June 1, 2017, the Corporation completed the sale of its non-U.S. consumer credit card business.

During the three and six months ended June 30, 2017, for the PCI loan portfolio, the Corporation recorded a provision benefit of \$24 million and an expense of \$44 million compared to a provision benefit of \$12 million and \$89 million for the same periods in 2016. Write-offs in the PCI loan portfolio totaled \$55 million and

\$88 million during the three and six months ended June 30, 2017 compared to \$82 million and \$187 million for the same periods in 2016. Write-offs included \$15 million associated with the sale of PCI loans during the three and six months ended June 30, 2017 compared to \$19 million and \$39 million for the same periods in

2016. The valuation allowance associated with the PCI loan portfolio was \$375 million and \$419 million at June 30, 2017 and December 31, 2016.

The table below presents the allowance and the carrying value of outstanding loans and leases by portfolio segment at June 30, 2017 and December 31, 2016.

Allowance and Carrying Value by Portfolio Segment

(Dollars in millions)	June 30, 2017			
	Consumer Real Estate	Credit Card and Other Consumer	Commercial	Total
Impaired loans and troubled debt restructurings <sup>(1)</sup>				
Allowance for loan and lease losses <sup>(2)</sup>	\$381	\$ 131	\$ 242	\$754
Carrying value <sup>(3)</sup>	13,993	478	2,712	17,183
Allowance as a percentage of carrying value	2.72 %	27.41 %	8.92 %	4.39 %
Loans collectively evaluated for impairment				
Allowance for loan and lease losses	\$1,553	\$ 3,255	\$ 4,938	\$9,746
Carrying value <sup>(3, 4)</sup>	232,951	186,449	460,314	879,714
Allowance as a percentage of carrying value <sup>(4)</sup>	0.67 %	1.75 %	1.07 %	1.11 %
Purchased credit-impaired loans				
Valuation allowance	\$375	n/a	n/a	\$375
Carrying value gross of valuation allowance	12,444	n/a	n/a	12,444
Valuation allowance as a percentage of carrying value	3.01 %	n/a	n/a	3.01 %
Total				
Total allowance for loan and lease losses	\$2,309	\$ 3,386	\$ 5,180	\$10,875
Carrying value <sup>(3, 4)</sup>	259,388	186,927	463,026	909,341
Total allowance as a percentage of carrying value <sup>(4)</sup>	0.89 %	1.81 %	1.12 %	1.20 %
	December 31, 2016			
Impaired loans and troubled debt restructurings <sup>(1)</sup>				
Allowance for loan and lease losses <sup>(2)</sup>	\$356	\$189	\$273	\$818
Carrying value <sup>(3)</sup>	15,408	610	3,202	19,220
Allowance as a percentage of carrying value	2.31 %	30.98 %	8.53 %	4.26 %
Loans collectively evaluated for impairment				
Allowance for loan and lease losses	\$1,975	\$3,283	\$4,985	\$10,243
Carrying value <sup>(3, 4)</sup>	229,094	197,470	449,290	875,854
Allowance as a percentage of carrying value <sup>(4)</sup>	0.86 %	1.66 %	1.11 %	1.17 %
Purchased credit-impaired loans				
Valuation allowance	\$419	n/a	n/a	\$419
Carrying value gross of valuation allowance	13,738	n/a	n/a	13,738
Valuation allowance as a percentage of carrying value	3.05 %	n/a	n/a	3.05 %
Less: Assets of business held for sale <sup>(5)</sup>				
Allowance for loan and lease losses <sup>(6)</sup>	n/a	\$(243 )	n/a	\$(243 )
Carrying value <sup>(3)</sup>	n/a	(9,214 )	n/a	(9,214 )
Total				
Allowance for loan and lease losses	\$2,750	\$3,229	\$5,258	\$11,237
Carrying value <sup>(3, 4)</sup>	258,240	188,866	452,492	899,598
Allowance as a percentage of carrying value <sup>(4)</sup>	1.06 %	1.71 %	1.16 %	1.25 %

(1)

Impaired loans include nonperforming commercial loans and all TDRs, including both commercial and consumer TDRs. Impaired loans exclude nonperforming consumer loans unless they are TDRs, and all consumer and commercial loans accounted for under the fair value option.

(2) Allowance for loan and lease losses includes \$29 million and \$27 million related to impaired U.S. small business commercial at June 30, 2017 and December 31, 2016.

(3) Amounts are presented gross of the allowance for loan and lease losses.

(4) Outstanding loan and lease balances and ratios do not include loans accounted for under the fair value option of \$7.3 billion and \$7.1 billion at June 30, 2017 and December 31, 2016.

(5) Represents allowance for loan and lease losses and loans related to the non-U.S. credit card loan portfolio, which was included in assets of business held for sale on the Consolidated Balance Sheet at December 31, 2016. On June 1, 2017, the Corporation completed the sale of its non-U.S. consumer credit card business.

(6) Includes \$61 million of allowance for loan and lease losses related to impaired loans and TDRs and \$182 million related to loans collectively evaluated for impairment at December 31, 2016.

n/a = not applicable

## NOTE 6 Securitizations and Other Variable Interest Entities

The Corporation utilizes VIEs in the ordinary course of business to support its own and its customers' financing and investing needs. For more information on the Corporation's use of VIEs, see Note 1 – Summary of Significant Accounting Principles and Note 6 – Securitizations and Other Variable Interest Entities to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.

The tables in this Note present the assets and liabilities of consolidated and unconsolidated VIEs at June 30, 2017 and December 31, 2016, in situations where the Corporation has continuing involvement with transferred assets or if the Corporation otherwise has a variable interest in the VIE. The tables also present the Corporation's maximum loss exposure at June 30, 2017 and December 31, 2016 resulting from its involvement with consolidated VIEs and unconsolidated VIEs in which the Corporation holds a variable interest. The Corporation's maximum loss exposure is based on the unlikely event that all of the assets in the VIEs become worthless and incorporates not only potential losses associated with assets recorded on the Consolidated Balance Sheet but also potential losses associated with off-balance sheet commitments, such as unfunded liquidity commitments and other contractual arrangements. The Corporation's maximum loss exposure does not include losses previously recognized through write-downs of assets. The Corporation invests in ABS issued by third-party VIEs with which it has no other form of involvement and enters into certain commercial lending arrangements that may also incorporate the use of VIEs, for example to hold collateral. These securities and

loans are included in Note 3 – Securities or Note 4 – Outstanding Loans and Leases. In addition, the Corporation uses VIEs such as trust preferred securities trusts in connection with its funding activities. For additional information, see Note 11 – Long-term Debt to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K. The Corporation uses VIEs, such as common trust funds managed within Global Wealth & Investment Management (GWIM), to provide investment opportunities for clients. These VIEs, which are generally not consolidated by the Corporation, as applicable, are not included in the tables herein.

Except as described below, the Corporation did not provide financial support to consolidated or unconsolidated VIEs during the six months ended June 30, 2017 or the year ended December 31, 2016 that it was not previously contractually required to provide, nor does it intend to do so.

## First-lien Mortgage Securitizations

## First-lien Mortgages

As part of its mortgage banking activities, the Corporation securitizes a portion of the first-lien residential mortgage loans it originates or purchases from third parties. Except as described below and in Note 7 – Representations and Warranties Obligations and Corporate Guarantees, the Corporation does not provide guarantees or recourse to the securitization trusts other than standard representations and warranties.

The table below summarizes select information related to first-lien mortgage securitizations for the three and six months ended June 30, 2017 and 2016.

## First-lien Mortgage Securitizations

	Residential Mortgage - Agency				Commercial Mortgage			
	Three Months Ended June 30		Six Months Ended June 30		Three Months Ended June 30		Six Months Ended June 30	
(Dollars in millions)	2017	2016	2017	2016	2017	2016	2017	2016
Cash proceeds from new securitizations <sup>(1)</sup>	\$3,302	\$4,375	\$7,958	\$11,449	\$1,097	\$732	\$1,706	\$1,979
Gain (loss) on securitizations <sup>(2)</sup>	61	70	100	233	35	(6)	53	(9)
Repurchases from securitization trusts <sup>(3)</sup>	602	645	1,474	1,374	—	—	—	—

(1)

The Corporation transfers residential mortgage loans to securitizations sponsored by the GSEs or Government National Mortgage Association (GNMA) in the normal course of business and receives RMBS in exchange which may then be sold into the market to third-party investors for cash proceeds.

(2) A majority of the first-lien residential and commercial mortgage loans securitized are initially classified as LHFS and accounted for under the fair value option. Gains recognized on these LHFS prior to securitization, which totaled \$42 million and \$132 million, net of hedges, during the three and six months ended June 30, 2017 compared to \$92 million and \$200 million for the same periods in 2016, are not included in the table above.

(3) The Corporation may have the option to repurchase delinquent loans out of securitization trusts, which reduces the amount of servicing advances it is required to make. The Corporation may also repurchase loans from securitization trusts to perform modifications. Repurchased loans include FHA-insured mortgages collateralizing GNMA securities.

In addition to cash proceeds as reported in the table above, the Corporation received securities with an initial fair value of \$288 million and \$563 million in connection with first-lien mortgage securitizations for the three and six months ended June 30, 2017 compared to \$1.0 billion and \$1.9 billion for the same periods in 2016. The receipt of these securities represents non-cash operating and investing activities and, accordingly, is not reflected on the Consolidated Statement of Cash Flows. Substantially all of these securities were initially classified as Level 2 assets within the fair value hierarchy. During the three and six months ended June 30, 2017 and 2016, there were no changes to the initial classification.

The Corporation recognizes consumer MSRs from the sale or securitization of consumer real estate loans. The unpaid principal balance of loans serviced for investors, including residential mortgage and home equity loans, totaled \$304.9 billion and \$371.0 billion at June 30, 2017 and 2016. Servicing fee and ancillary fee income on serviced loans was \$233 million and \$478

million during the three and six months ended June 30, 2017 compared to \$299 million and \$601 million for the same periods in 2016. Servicing advances on serviced loans, including loans serviced for others and loans held for investment were \$5.4 billion and \$6.2 billion at June 30, 2017 and December 31, 2016. For more information on MSRs, see Note 14 – Fair Value Measurements.

During the six months ended June 30, 2016, the Corporation deconsolidated agency residential mortgage securitization vehicles with total assets of \$2.8 billion following the sale of retained interests to third parties, after which the Corporation no longer had the unilateral ability to liquidate the vehicles. Gains on sale of \$114 million related to the deconsolidations were recorded in other income in the Consolidated Statement of Income.

The following table summarizes select information related to first-lien mortgage securitization trusts in which the Corporation held a variable interest at June 30, 2017 and December 31, 2016.

## First-lien Mortgage VIEs

	Residential Mortgage								Commercial Mortgage	
	Agency		Non-agency		Subprime		Alt-A			
(Dollars in millions)	June 30 2017	December 31 2016	June 30 2017	December 31 2016	June 30 2017	December 31 2016	June 30 2017	December 31 2016	June 30 2017	December 31 2016
Unconsolidated VIEs										
Maximum loss exposure <sup>(1)</sup>	\$20,056	\$22,661	\$661	\$757	\$2,596	\$2,750	\$504	\$560	\$372	\$344
On-balance sheet assets										
Senior securities held <sup>(2)</sup> :										
Trading account assets	\$463	\$1,399	\$13	\$20	\$6	\$112	\$78	\$118	\$64	\$51
Debt securities carried at fair value	16,138	17,620	385	441	2,195	2,235	307	305	—	—
Held-to-maturity securities	3,444	3,630	—	—	—	—	—	—	93	64
Subordinate securities held <sup>(2)</sup> :										
Trading account assets	—	—	1	1	15	23	1	1	22	14
Debt securities carried at fair value	—	—	6	8	2	2	21	23	48	54
Held-to-maturity securities	—	—	—	—	—	—	—	—	—	13
Residual interests held	—	—	—	—	—	—	—	—	24	25
All other assets <sup>(3)</sup>	11	12	24	28	—	—	97	113	—	—
Total retained positions	\$20,056	\$22,661	\$429	\$498	\$2,218	\$2,372	\$504	\$560	\$251	\$221
Principal balance outstanding <sup>(4)</sup>	\$249,610	\$265,332	\$11,678	\$16,280	\$17,853	\$19,373	\$31,141	\$35,788	\$18,393	\$23,826
Consolidated VIEs										
Maximum loss exposure <sup>(1)</sup>	\$16,009	\$18,084	\$—	\$—	\$—	\$—	\$—	\$25	\$—	\$—
On-balance sheet assets										
Trading account assets	\$137	\$434	\$—	\$—	\$—	\$—	\$—	\$99	\$—	\$—
Loans and leases	15,581	17,223	—	—	—	—	—	—	—	—
All other assets	291	427	—	—	—	—	—	—	—	—
Total assets	\$16,009	\$18,084	\$—	\$—	\$—	\$—	\$—	\$99	\$—	\$—

On-balance sheet  
liabilities

Long-term debt	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$74	\$—	\$—
All other liabilities	2	4	—	—	—	—	—	—	—	—
Total liabilities	\$2	\$4	\$—	\$—	\$—	\$—	\$—	\$74	\$—	\$—

Maximum loss exposure includes obligations under loss-sharing reinsurance and other arrangements for non-agency residential mortgage and commercial mortgage securitizations, but excludes the liability for (1) representations and warranties obligations and corporate guarantees and also excludes servicing advances and other servicing rights and obligations. For additional information, see Note 7 – Representations and Warranties Obligations and Corporate Guarantees and Note 14 – Fair Value Measurements.

As a holder of these securities, the Corporation receives scheduled principal and interest payments. During the three and six months ended June 30, 2017, the Corporation recognized \$1 million and \$16 million compared to \$2 (2) million and \$4 million for the same periods in 2016 of credit-related impairment losses in earnings on those securities classified as AFS debt securities. During the three and six months ended June 30, 2017 and 2016, the Corporation recognized no credit-related impairment losses in earnings on those securities classified as HTM.

Not included in the table above are all other assets of \$136 million and \$189 million, representing the unpaid principal balance of mortgage loans eligible for repurchase from unconsolidated residential mortgage securitization (3) vehicles, principally guaranteed by GNMA, and all other liabilities of \$136 million and \$189 million, representing the principal amount that would be payable to the securitization vehicles if the Corporation was to exercise the repurchase option, at June 30, 2017 and December 31, 2016.

(4) Principal balance outstanding includes loans where the Corporation was the transferor to securitization vehicles with which it has continuing involvement, which may include servicing the loans.

## Other Asset-backed Securitizations

The table below summarizes select information related to home equity loan, credit card and other asset-backed VIEs in which the Corporation held a variable interest at June 30, 2017 and December 31, 2016.

## Home Equity Loan, Credit Card and Other Asset-backed VIEs

(Dollars in millions)	Home Equity Loan (1)		Credit Card (2, 3)		Resecuritization Trusts		Municipal Bond Trusts	
	June 30 2017	December 31 2016	June 30 2017	December 31 2016	June 30 2017	December 31 2016	June 30 2017	December 31 2016
<b>Unconsolidated VIEs</b>								
Maximum loss exposure	\$2,283	\$ 2,732	\$—	\$—	\$9,561	\$ 9,906	\$1,617	\$ 1,635
<b>On-balance sheet assets</b>								
<b>Senior securities held (4, 5):</b>								
Trading account assets	\$—	\$—	\$—	\$—	\$1,312	\$ 902	\$9	\$—
Debt securities carried at fair value	41	46	—	—	2,036	2,338	—	—
Held-to-maturity securities	—	—	—	—	6,115	6,569	—	—
<b>Subordinate securities held (4, 5):</b>								
Trading account assets	—	—	—	—	26	27	—	—
Debt securities carried at fair value	—	—	—	—	72	70	—	—
Total retained positions	\$41	\$ 46	\$—	\$—	\$9,561	\$ 9,906	\$9	\$—
Total assets of VIEs (6)	\$3,142	\$ 4,274	\$—	\$—	\$19,645	\$ 22,155	\$2,340	\$ 2,406
<b>Consolidated VIEs</b>								
Maximum loss exposure	\$128	\$ 149	\$23,557	\$ 25,859	\$256	\$ 420	\$1,210	\$ 1,442
<b>On-balance sheet assets</b>								
Trading account assets	\$—	\$—	\$—	\$—	\$723	\$ 1,428	\$1,213	\$ 1,454
Loans and leases	208	244	32,873	35,135	—	—	—	—
Allowance for loan and lease losses	(14)	(16)	(982)	(1,007)	—	—	—	—
All other assets	6	7	687	793	—	—	1	—
Total assets	\$200	\$ 235	\$32,578	\$ 34,921	\$723	\$ 1,428	\$1,214	\$ 1,454
<b>On-balance sheet liabilities</b>								
Short-term borrowings	\$—	\$—	\$—	\$—	\$—	\$—	\$97	\$ 348
Long-term debt	90	108	8,998	9,049	467	1,008	—	12
All other liabilities	—	—	23	13	—	—	4	—
Total liabilities	\$90	\$ 108	\$9,021	\$ 9,062	\$467	\$ 1,008	\$101	\$ 360

For unconsolidated home equity loan VIEs, the maximum loss exposure includes outstanding trust certificates issued by trusts in rapid amortization, net of recorded reserves. For both consolidated and unconsolidated home

(1) equity loan VIEs, the maximum loss exposure excludes the liability for representations and warranties obligations and corporate guarantees. For additional information, see Note 7 – Representations and Warranties Obligations and Corporate Guarantees.

(2) At June 30, 2017 and December 31, 2016, loans and leases in the consolidated credit card trust included \$15.4 billion and \$17.6 billion of seller's interest.

(3) At June 30, 2017 and December 31, 2016, all other assets in the consolidated credit card trust included restricted cash, certain short-term investments, and unbilled accrued interest and fees.

(4) As a holder of these securities, the Corporation receives scheduled principal and interest payments. During the three and six months ended June 30, 2017, the Corporation recognized \$0 and \$2 million compared to \$1 million



and \$2 million for the same periods in 2016 of credit-related impairment losses in earnings on securities classified as AFS debt securities. During the three and six months ended June 30, 2017 and 2016, the Corporation recognized no credit-related impairment losses in earnings on securities classified as HTM.

- (5) The retained senior and subordinate securities were valued using quoted market prices or observable market inputs (Level 2 of the fair value hierarchy).
- (6) Total assets include loans the Corporation transferred with which it has continuing involvement, which may include servicing the loan.

#### Home Equity Loans

The Corporation retains interests in home equity securitization trusts to which it transferred home equity loans. These retained interests include senior and subordinate securities and residual interests. In addition, the Corporation may be obligated to provide subordinate funding to the trusts during a rapid amortization event. This obligation is included in the maximum loss exposure in the table above. The charges that will ultimately be recorded as a result of the rapid amortization events depend on the undrawn available credit on the home equity lines, performance of the loans, the amount of subsequent draws and the timing of related cash flows.

#### Credit Card Securitizations

The Corporation securitizes originated and purchased credit card loans. The Corporation's continuing involvement with the securitization trust includes servicing the receivables, retaining an undivided interest (seller's interest) in the receivables, and holding certain retained interests including senior and subordinate securities, subordinate interests in accrued interest

and fees on the securitized receivables, and cash reserve accounts.

For the six months ended June 30, 2017 and 2016, \$2.0 billion and \$750 million of new senior debt securities were issued to third-party investors from the credit card securitization trust.

At both June 30, 2017 and December 31, 2016, the Corporation held subordinate securities issued by the credit card securitization trust with a notional principal amount of \$7.5 billion. These securities serve as a form of credit enhancement to the senior debt securities and have a stated interest rate of zero percent. There were \$323 million of these subordinate securities issued during the six months ended June 30, 2017 compared to \$121 million for the same period in 2016.

#### Resecuritization Trusts

The Corporation transfers securities, typically MBS, into resecuritization vehicles at the request of customers seeking securities with specific characteristics. Generally, there are no significant ongoing activities performed in a resecuritization trust and no single investor has the unilateral ability to liquidate the trust.

The Corporation resecuritized \$7.3 billion and \$15.1 billion of securities during the three and six months ended June 30, 2017 compared to \$8.1 billion and \$14.7 billion for the same periods in 2016. Securities transferred into resecuritization vehicles during the three and six months ended June 30, 2017 and 2016 were measured at fair value with changes in fair value recorded in trading account profits prior to the resecuritization and no gain or loss on sale was recorded. Resecuritization proceeds included securities with an initial fair value of \$1.1 billion and \$1.8 billion during the three and six months ended June 30, 2017 compared to \$1.1 billion and \$2.2 billion for the same periods in 2016. All of the securities received as resecuritization proceeds were classified as trading securities and were categorized as Level 2 within the fair value hierarchy.

#### Municipal Bond Trusts

The Corporation administers municipal bond trusts that hold highly-rated, long-term, fixed-rate municipal bonds. The trusts

obtain financing by issuing floating-rate trust certificates that reprice on a weekly or other short-term basis to third-party investors.

The Corporation's liquidity commitments to unconsolidated municipal bond trusts, including those for which the Corporation was transferor, totaled \$1.6 billion at both June 30, 2017 and December 31, 2016. The weighted-average remaining life of bonds held in the trusts at June 30, 2017 was 5.3 years. There were no material write-downs or downgrades of assets or issuers during the six months ended June 30, 2017 and 2016.

#### Other Variable Interest Entities

The table below summarizes select information related to other VIEs in which the Corporation held a variable interest at June 30, 2017 and December 31, 2016.

#### Other VIEs

(Dollars in millions)	June 30, 2017			December 31, 2016		
	Consolidated	Unconsolidated	Total	Consolidated	Unconsolidated	Total
Maximum loss exposure	\$5,428	\$ 18,105	\$23,533	\$6,114	\$ 17,754	\$23,868
On-balance sheet assets						
Trading account assets	\$2,470	\$ 277	\$2,747	\$2,358	\$ 233	\$2,591
Debt securities carried at fair value	—	231	231	—	122	122
Loans and leases	2,942	3,746	6,688	3,399	3,249	6,648
Allowance for loan and lease losses	(8 )	(30 )	(38 )	(9 )	(24 )	(33 )
Loans held-for-sale	93	102	195	188	464	652
All other assets	151	13,410	13,561	369	13,156	13,525
Total	\$5,648	\$ 17,736	\$23,384	\$6,305	\$ 17,200	\$23,505
On-balance sheet liabilities						
Long-term debt <sup>(1)</sup>	\$210	\$ —	\$210	\$395	\$ —	\$395
All other liabilities	23	3,065	3,088	24	2,959	2,983
Total	\$233	\$ 3,065	\$3,298	\$419	\$ 2,959	\$3,378
Total assets of VIEs	\$5,648	\$ 66,088	\$71,736	\$6,305	\$ 62,269	\$68,574

<sup>(1)</sup> Includes \$13 million and \$229 million of long-term debt at June 30, 2017 and December 31, 2016 issued by other consolidated VIEs, which has recourse to the general credit of the Corporation.

#### Customer Vehicles

Customer vehicles include credit-linked, equity-linked and commodity-linked note vehicles, repackaging vehicles, and asset acquisition vehicles, which are typically created on behalf of customers who wish to obtain market or credit exposure to a specific company, index, commodity or financial instrument.

The Corporation's maximum loss exposure to consolidated and unconsolidated customer vehicles totaled \$2.2 billion and \$2.9 billion at June 30, 2017 and December 31, 2016, including the notional amount of derivatives to which the Corporation is a counterparty, net of losses previously recorded, and the Corporation's investment, if any, in securities issued by the vehicles. The Corporation also had liquidity commitments, including written put options and collateral

value guarantees, with certain unconsolidated vehicles of \$41 million and \$323 million at June 30, 2017 and December 31, 2016, that are included in the table above.

#### Collateralized Debt Obligation Vehicles

The Corporation receives fees for structuring CDO vehicles, which hold diversified pools of fixed-income securities, typically corporate debt or ABS, which the CDO vehicles fund by issuing multiple tranches of debt and equity securities. CDOs are generally managed by third-party portfolio managers. The Corporation typically transfers assets to these CDOs, holds securities issued by the CDOs and may be a derivative counterparty to the CDOs. The Corporation's maximum loss exposure to consolidated and unconsolidated CDOs totaled \$508

million and \$430 million at June 30, 2017 and December 31, 2016.

#### Investment Vehicles

The Corporation sponsors, invests in or provides financing, which may be in connection with the sale of assets, to a variety of investment vehicles that hold loans, real estate, debt securities or other financial instruments and are designed to provide the desired investment profile to investors or the Corporation. At June 30, 2017 and December 31, 2016, the Corporation's consolidated investment vehicles had total assets of \$626 million and \$846 million. The Corporation also held investments in unconsolidated vehicles with total assets of \$21.2 billion and \$17.3 billion at June 30, 2017 and December 31, 2016. The Corporation's maximum loss exposure associated with both consolidated and unconsolidated investment vehicles totaled \$4.9 billion and \$5.1 billion at June 30, 2017 and December 31, 2016 comprised primarily of on-balance sheet assets less non-recourse liabilities.

In prior periods, the Corporation transferred servicing advance receivables to independent third parties in connection with the sale of MSRs. Portions of the receivables were transferred into unconsolidated securitization trusts. The Corporation retained senior interests in such receivables with a maximum loss exposure and funding obligation of \$90 million and \$150 million, including a funded balance of \$58 million and \$75 million at June 30, 2017 and December 31, 2016, which were classified in other debt securities carried at fair value.

#### Leveraged Lease Trusts

The Corporation's net investment in consolidated leveraged lease trusts totaled \$2.4 billion and \$2.6 billion at June 30, 2017 and December 31, 2016. The trusts hold long-lived equipment such as rail cars, power generation and distribution equipment, and commercial aircraft. The Corporation structures the trusts and holds a significant residual interest. The net investment represents the Corporation's maximum loss exposure to the trusts in the unlikely event that the leveraged lease investments become worthless. Debt issued by the leveraged lease trusts is non-recourse to the Corporation.

#### Tax Credit Vehicles

The Corporation holds investments in unconsolidated limited partnerships and similar entities that construct, own and operate affordable housing, wind and solar projects. An unrelated third party is typically the general partner or managing member and has control over the significant activities of the vehicle. The Corporation earns a return primarily through the receipt of tax credits allocated to the projects. The maximum loss exposure included in the Other VIEs table was \$13.3 billion and \$12.6 billion at June 30, 2017 and December 31, 2016. The Corporation's risk of loss is generally mitigated by policies requiring that the project qualify for the expected tax credits prior to making its investment.

The Corporation's investments in affordable housing partnerships, which are reported in other assets on the Consolidated Balance Sheet, totaled \$7.5 billion and \$7.4 billion, including unfunded commitments to provide capital contributions of \$2.7 billion and \$2.7 billion at June 30, 2017 and December 31, 2016. The unfunded commitments are expected to be paid over the next five years. The Corporation recognized tax credits and other tax benefits from investments in affordable housing partnerships of \$281 million and \$532 million, and reported pre-tax losses in other noninterest income of \$207 million and \$403 million for the three and six months ended June 30, 2017. For the same periods in 2016, the Corporation recognized tax credits and other tax benefits of \$289 million and \$482 million, and pre-tax losses of \$198 million and \$396 million. Tax credits are recognized as part of the Corporation's annual effective tax rate used to determine tax expense in a given quarter. Accordingly, the portion of a year's expected tax benefits recognized in any given quarter may differ from 25 percent. The Corporation may from time to time be asked to invest additional amounts to support a troubled affordable housing project. Such additional investments have not been and are not expected to be significant.

#### NOTE 7 Representations and Warranties Obligations and Corporate Guarantees

For information on representations and warranties obligations and corporate guarantees and related settlement actions, see Note 7 – Representations and Warranties Obligations and Corporate Guarantees to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.

#### Unresolved Repurchase Claims

Unresolved representations and warranties repurchase claims represent the notional amount of repurchase claims made by counterparties, typically the outstanding principal balance or the unpaid principal balance at the time of default. In the case of first-lien mortgages, the claim amount is often significantly greater than

the expected loss amount due to the benefit of collateral and, in some cases, mortgage insurance (MI) or mortgage guarantee payments. Claims received from a counterparty remain outstanding until the underlying loan is repurchased, the claim is rescinded by the counterparty, the Corporation determines that the applicable statute of limitations has expired, or representations and warranties claims with respect to the applicable trust are settled, and fully and finally released. The Corporation does not include duplicate claims in the amounts disclosed.

The following table presents unresolved repurchase claims at June 30, 2017 and December 31, 2016. The unresolved repurchase claims include only claims where the Corporation believes that the counterparty has the contractual right to submit claims. The unresolved repurchase claims predominantly relate to subprime and pay option first-lien loans and home equity loans. For more information, see Private-label Securitizations and Whole-loan Sales Experience in the MD&A of the Corporation's 2016 Annual Report on Form 10-K, as well as Note 12 – Commitments and Contingencies to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.

Unresolved Repurchase Claims by Counterparty, net of duplicate claims

(Dollars in millions)	June 30 2017	December 31 2016
By counterparty		
Private-label securitization trustees, whole-loan investors, including third-party securitization sponsors and other <sup>(1)</sup>	\$ 16,024	\$ 16,685
Monolines	1,582	1,583
GSEs	7	9
Total unresolved repurchase claims by counterparty, net of duplicate claims	\$ 17,613	\$ 18,277

<sup>(1)</sup> Includes \$11.3 billion and \$11.9 billion of claims based on individual file reviews and \$4.7 billion and \$4.8 billion of claims submitted without individual file reviews at June 30, 2017 and December 31, 2016.

During the six months ended June 30, 2017, the Corporation received \$49 million in new repurchase claims and \$714 million in claims were resolved, including \$640 million related to settlements. Of the remaining unresolved monoline claims, substantially all of the claims pertain to second-lien loans and are currently the subject of litigation with a single monoline insurer. There may be additional claims or file requests in the future.

In addition to the unresolved repurchase claims in the Unresolved Repurchase Claims by Counterparty, net of duplicate claims table, the Corporation has received notifications from sponsors of third-party securitizations with whom the Corporation engaged in whole-loan transactions indicating that the Corporation may have indemnity obligations with respect to loans for which the Corporation has not received a repurchase request. These outstanding notifications totaled \$1.3 billion at both June 30, 2017 and December 31, 2016. There were no new notifications received during the six months ended June 30, 2017.

The presence of repurchase claims on a given trust, receipt of notices of indemnification obligations and receipt of other communications, as discussed above, are all factors that inform the Corporation's liability for representations and warranties and the corresponding estimated range of possible loss.

### Private-label Securitizations and Whole-loan Sales Experience

Prior to 2009, legacy companies and certain subsidiaries sold pools of first-lien residential mortgage loans and home equity loans as private-label securitizations or in the form of whole loans. For more information on private-label securitizations and whole-loan sales experience, see Note 7 – Representations and Warranties Obligations and Corporate Guarantees to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.

At June 30, 2017 and December 31, 2016, the notional amount of unresolved repurchase claims submitted by private-label securitization trustees, whole-loan investors, including third-party securitization sponsors, and others was \$16.0 billion and \$16.7 billion. The notional amount of unresolved repurchase claims at June 30, 2017 and December 31, 2016 included \$5.1 billion and \$5.6 billion of claims related to loans in specific private-label securitization groups or tranches where the Corporation owns substantially all of the outstanding securities or will otherwise realize the benefit of any repurchase claims paid.

The overall decrease in the notional amount of outstanding unresolved repurchase claims in the six months ended June 30, 2017 was primarily due to claims that were resolved as a result of settlements. Outstanding repurchase claims remained unresolved primarily due to (1) the level of detail, support and analysis accompanying such claims, which impact overall claim

quality and, therefore, claims resolution, and (2) the lack of an established process to resolve disputes related to these claims.

### Liability for Representations and Warranties and Corporate Guarantees and Estimated Range of Possible Loss

The liability for representations and warranties and corporate guarantees is included in accrued expenses and other liabilities on the Consolidated Balance Sheet and the related provision is included in mortgage banking income in the Consolidated Statement of Income.

The Corporation's representations and warranties liability and the corresponding estimated range of possible loss at June 30, 2017 considers, among other things, the repurchase experience implied in the settlements with BNY Mellon and other counterparties. Since the securitization trusts that were included in the settlements with BNY Mellon and other counterparties differ from other securitization trusts, the Corporation adjusts the experience implied by those prior settlements based on the characteristics of those trusts where the Corporation has a continuing possibility of timely claims in order to determine the representations and warranties liability and the corresponding estimated range of possible loss.

The table below presents a rollforward of the liability for representations and warranties and corporate guarantees.

### Representations and Warranties and Corporate Guarantees

(Dollars in millions)	Three Months		Six Months Ended	
	Ended June 30	2016	2017	2016
Liability for representations and warranties and corporate guarantees, beginning of period	\$2,294	\$2,812	\$2,339	\$11,326
Additions for new sales	1	1	2	2
Payments <sup>(1)</sup>	(45 )	(107 )	(88 )	(8,664 )
Provision (benefit)	(2 )	17	(5 )	59
Liability for representations and warranties and corporate guarantees, June 30	\$2,248	\$2,723	\$2,248	\$2,723

<sup>(1)</sup> In February 2016, the Corporation made an \$8.5 billion settlement payment to BNY Mellon as part of the settlement with BNY Mellon.

The representations and warranties liability represents the Corporation's best estimate of probable incurred losses as of June 30, 2017. However, it is reasonably possible that future representations and warranties losses may occur in excess of the amounts recorded for these exposures. The Corporation currently estimates that the range of possible loss for representations and warranties exposures could be up to \$2 billion over existing accruals at June 30, 2017. The Corporation treats claims that are time-barred as resolved and does not consider such claims in the estimated range of possible loss. The estimated range of possible loss reflects principally exposures related to loans in private-label

securitization trusts. It represents a reasonably possible loss, but

does not represent a probable loss, and is based on currently available information, significant judgment and a number of assumptions that are subject to change. For more information on the liability for representations and warranties exposures and the corresponding estimated range of possible loss, see Note 7 – Representations and Warranties Obligations and Corporate Guarantees to the Consolidated Financial Statements of the Corporation's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2017, and Note 7 – Representations and Warranties Obligations and Corporate Guarantees to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.

## NOTE 8 Goodwill and Intangible Assets

## Goodwill

The table below presents goodwill balances by business segment and All Other at June 30, 2017 and December 31, 2016. The reporting units utilized for goodwill impairment testing are the operating segments or one level below. For more information, see Note 8 – Goodwill and Intangible Assets to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.

## Goodwill

(Dollars in millions)	June 30	December 31
	2017	2016
Consumer Banking	\$30,123	\$ 30,123
Global Wealth & Investment Management	9,681	9,681
Global Banking	23,923	23,923
Global Markets	5,197	5,197
All Other	45	820
Less: Goodwill of business held for sale <sup>(1)</sup>	—	(775 )
Total goodwill	\$68,969	\$ 68,969

Reflects the goodwill assigned to the non-U.S. consumer credit card business, which was included in assets of <sup>(1)</sup> business held for sale on the Consolidated Balance Sheet at December 31, 2016. On June 1, 2017, the Corporation completed the sale of this business.

During the three months ended June 30, 2017, the Corporation completed its annual goodwill impairment test as of June 30, 2017 for all applicable reporting units. Based on the results of the annual goodwill impairment test, the Corporation determined there was no impairment. For more information regarding annual goodwill impairment testing, see Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.

## Intangible Assets

The table below presents the gross and net carrying values and accumulated amortization for intangible assets at June 30, 2017 and December 31, 2016.

Intangible Assets <sup>(1, 2)</sup>

(Dollars in millions)	June 30, 2017			December 31, 2016		
	Gross Carrying Value	Accumulated Amortization	Net Carrying Value	Gross Carrying Value	Accumulated Amortization	Net Carrying Value
Purchased credit card and affinity relationships	\$5,919	\$ 5,502	\$ 417	\$6,830	\$ 6,243	\$ 587
Core deposit and other intangibles <sup>(3)</sup>	3,835	2,095	1,740	3,836	2,046	1,790
Customer relationships	3,886	3,433	453	3,887	3,275	612
Total intangible assets <sup>(4)</sup>	\$13,640	\$ 11,030	\$ 2,610	\$14,553	\$ 11,564	\$ 2,989

<sup>(1)</sup> Excludes fully amortized intangible assets.

<sup>(2)</sup> At June 30, 2017 and December 31, 2016, none of the intangible assets were impaired.

<sup>(3)</sup> Includes \$1.6 billion at both June 30, 2017 and December 31, 2016 of intangible assets associated with trade names that have an indefinite life and, accordingly, are not amortized.

Includes \$67 million at December 31, 2016 of intangible assets assigned to the non-U.S. consumer credit card <sup>(4)</sup> business, which was included in assets of business held for sale on the Consolidated Balance Sheet at December 31, 2016.

Amortization of intangibles expense was \$160 million and \$322 million for the three and six months ended June 30, 2017 compared to \$186 million and \$373 million for the same periods in 2016. The Corporation estimates aggregate amortization expense will be \$298 million for the remainder of 2017, and \$538 million, \$109 million, \$48 million, \$2 million and \$1 million for the years through 2022.





NOTE 9 Federal Funds Sold or Purchased, Securities Financing Agreements and Short-term Borrowings

The following table presents federal funds sold or purchased, securities financing agreements, which include securities borrowed or purchased under agreements to resell and securities loaned or sold under agreements to repurchase, and short-term borrowings. The Corporation elects to account for certain securities financing agreements and short-term borrowings under the fair value option. For more information on the election of the fair value option, see Note 15 – Fair Value Option.

(Dollars in millions)	Three Months Ended June 30				Six Months Ended June 30			
	2017		2016		2017		2016	
	Amount	Rate	Amount	Rate	Amount	Rate	Amount	Rate
Federal funds sold and securities borrowed or purchased under agreements to resell								
Average during period	\$226,700	0.99 %	\$223,005	0.47 %	\$221,579	0.91 %	\$216,094	0.50 %
Maximum month-end balance during period	237,064	n/a	225,015	n/a	237,064	n/a	225,015	n/a
Federal funds purchased and securities loaned or sold under agreements to repurchase								
Average during period	\$208,760	1.21 %	\$184,392	1.03 %	\$200,265	1.08 %	\$187,844	1.03 %
Maximum month-end balance during period	218,017	n/a	182,776	n/a	218,017	n/a	196,631	n/a
Short-term borrowings								
Average during period	42,881	2.65	31,460	1.95	41,468	2.39	31,077	1.77
Maximum month-end balance during period	46,202	n/a	33,051	n/a	46,202	n/a	33,051	n/a

n/a = not applicable

Offsetting of Securities Financing Agreements

The Corporation enters into securities financing agreements to accommodate customers (also referred to as “matched-book transactions”), obtain securities to cover short positions, and to finance inventory positions. Substantially all of the Corporation’s securities financing activities are transacted under legally enforceable master repurchase agreements or legally enforceable master securities lending agreements that give the Corporation, in the event of default by the counterparty, the right to liquidate securities held and to offset receivables and payables with the same counterparty. For more information, see Note 10 – Federal Funds Sold or Purchased, Securities Financing Agreements and

Short-term Borrowings to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.

The Securities Financing Agreements table presents securities financing agreements included on the Consolidated Balance Sheet in federal funds sold and securities borrowed or purchased under agreements to resell, and in federal funds purchased and securities loaned or sold under agreements to repurchase at June 30, 2017 and December 31, 2016. Balances are presented on a gross basis, prior to the application of counterparty netting. Gross assets and liabilities are adjusted on an aggregate basis to take into consideration the effects of legally enforceable master netting agreements. For more information on the offsetting of derivatives, see Note 2 – Derivatives.

Securities Financing Agreements

(Dollars in millions)	June 30, 2017		Net Balance Sheet Amount	Financial Instruments (2)	Net Assets/Liabilities
	Gross Assets/Liabilities (1)	Amounts Offset			
Securities borrowed or purchased under agreements to resell (3)	\$371,182	\$(153,981)	\$217,201	\$(163,583)	\$ 53,618

Securities loaned or sold under agreements to repurchase	\$ 350,380	\$(153,981)	\$ 196,399	\$(166,044)	\$ 30,355
Other <sup>(4)</sup>	17,130	—	17,130	(17,130)	—
Total	\$ 367,510	\$(153,981)	\$ 213,529	\$(183,174)	\$ 30,355

## December 31, 2016

Securities borrowed or purchased under agreements to resell <sup>(3)</sup>	\$ 326,970	\$(128,746)	\$ 198,224	\$(154,974)	\$ 43,250
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Securities loaned or sold under agreements to repurchase	\$ 299,028	\$(128,746)	\$ 170,282	\$(140,774)	\$ 29,508
Other <sup>(4)</sup>	14,448	—	14,448	(14,448)	—
Total	\$ 313,476	\$(128,746)	\$ 184,730	\$(155,222)	\$ 29,508

(1) Includes activity where uncertainty exists as to the enforceability of certain master netting agreements under bankruptcy laws in some countries or industries.

Financial instruments includes securities collateral received or pledged under repurchase or securities lending agreements where there is a legally enforceable master netting agreement. These amounts are not offset on the

(2) Consolidated Balance Sheet but are shown as a reduction to derive a net asset or liability. Securities collateral received or pledged where the legal enforceability of the master netting agreements is uncertain is excluded from the table.

(3) Excludes repurchase activity of \$10.3 billion and \$10.1 billion reported in loans and leases on the Consolidated Balance Sheet at June 30, 2017 and December 31, 2016.

(4) Balance is reported in accrued expenses and other liabilities on the Consolidated Balance Sheet and relates to transactions where the Corporation acts as the lender in a securities lending agreement and receives securities that can be pledged as collateral or sold. In these transactions, the Corporation recognizes an asset at fair value, representing the securities received, and a liability, representing the obligation to return those securities.

Repurchase Agreements and Securities Loaned Transactions Accounted for as Secured Borrowings

The tables below present securities sold under agreements to repurchase and securities loaned by remaining contractual term to maturity and class of collateral pledged. Included in "Other" are transactions where the Corporation acts as the lender in a securities lending agreement and receives securities that can be

pledged as collateral or sold. Certain agreements contain a right to substitute collateral and/or terminate the agreement prior to maturity at the option of the Corporation or the counterparty. Such agreements are included in the table below based on the remaining contractual term to maturity. At June 30, 2017 and December 31, 2016, the Corporation had no outstanding repurchase-to-maturity transactions.

Remaining Contractual Maturity

(Dollars in millions)	June 30, 2017				
	Overnight and Continuous	30 Days or Less	After 30 Days Through 90 Days	Greater than 90 Days <sup>(1)</sup>	Total
Securities sold under agreements to repurchase	\$128,827	\$91,895	\$48,976	\$55,630	\$325,328
Securities loaned	17,670	864	2,017	4,501	25,052
Other	17,130	—	—	—	17,130
Total	\$163,627	\$92,759	\$50,993	\$60,131	\$367,510

  

(Dollars in millions)	December 31, 2016				
	Overnight and Continuous	30 Days or Less	After 30 Days Through 90 Days	Greater than 90 Days <sup>(1)</sup>	Total
Securities sold under agreements to repurchase	\$129,853	\$77,780	\$31,851	\$40,752	\$280,236
Securities loaned	8,564	6,602	1,473	2,153	18,792
Other	14,448	—	—	—	14,448
Total	\$152,865	\$84,382	\$33,324	\$42,905	\$313,476

<sup>(1)</sup> No agreements have maturities greater than three years.

Class of Collateral Pledged

(Dollars in millions)	June 30, 2017			
	Securities Sold Under Agreements to Repurchase	Securities Loaned	Other	Total
U.S. government and agency securities	\$176,946	\$—	\$185	\$177,131
Corporate securities, trading loans and other	12,285	2,309	194	14,788
Equity securities	30,629	16,057	16,701	63,387
Non-U.S. sovereign debt	99,699	6,686	50	106,435
Mortgage trading loans and ABS	5,769	—	—	5,769
Total	\$325,328	\$25,052	\$17,130	\$367,510

  

(Dollars in millions)	December 31, 2016			
	Securities Sold Under Agreements to Repurchase	Securities Loaned	Other	Total
U.S. government and agency securities	\$153,184	\$—	\$70	\$153,254
Corporate securities, trading loans and other	11,086	1,630	127	12,843
Equity securities	24,007	11,175	14,196	49,378
Non-U.S. sovereign debt	84,171	5,987	55	90,213

Mortgage trading loans and ABS	7,788	—	—	7,788
Total	\$280,236	\$ 18,792	\$ 14,448	\$313,476

The Corporation is required to post collateral with a market value equal to or in excess of the principal amount borrowed under repurchase agreements. For securities loaned transactions, the Corporation receives collateral in the form of cash, letters of credit or other securities. To help ensure that the market value of the underlying collateral remains sufficient, collateral is generally valued daily, and the Corporation may be required to deposit

additional collateral or may receive or return collateral pledged when appropriate. Repurchase agreements and securities loaned transactions are generally either overnight, continuous (i.e., no stated term) or short-term. The Corporation manages liquidity risks related to these agreements by sourcing funding from a diverse group of counterparties, providing a range of securities collateral and pursuing longer durations, when appropriate.

## NOTE 10 Commitments and Contingencies

In the normal course of business, the Corporation enters into a number of off-balance sheet commitments. These commitments expose the Corporation to varying degrees of credit and market risk and are subject to the same credit and market risk limitation reviews as those instruments recorded on the Consolidated Balance Sheet. For more information on commitments and contingencies, see Note 12 – Commitments and Contingencies to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.

## Credit Extension Commitments

The Corporation enters into commitments to extend credit such as loan commitments, standby letters of credit (SBLCs) and commercial letters of credit to meet the financing needs of its customers. The table below includes the notional amount of unfunded legally binding lending commitments net of amounts distributed (e.g., syndicated or participated) to other financial institutions. The distributed amounts were \$11.6 billion and \$12.1

billion at June 30, 2017 and December 31, 2016. At June 30, 2017, the carrying value of these commitments, excluding commitments accounted for under the fair value option, was \$775 million, including deferred revenue of \$18 million and a reserve for unfunded lending commitments of \$757 million. At December 31, 2016, the comparable amounts were \$779 million, \$17 million and \$762 million, respectively. The carrying value of these commitments is classified in accrued expenses and other liabilities on the Consolidated Balance Sheet.

The table below also includes the notional amount of commitments of \$4.5 billion and \$7.0 billion at June 30, 2017 and December 31, 2016 that are accounted for under the fair value option. However, the table below excludes cumulative net fair value of \$138 million and \$173 million on these commitments, which is classified in accrued expenses and other liabilities. For more information regarding the Corporation's loan commitments accounted for under the fair value option, see Note 15 – Fair Value Option.

## Credit Extension Commitments

(Dollars in millions)	June 30, 2017				Total
	Expire in One Year or Less	Expire After One Year Through Three Years	Expire After Three Years Through Five Years	Expire After Five Years	
Notional amount of credit extension commitments					
Loan commitments	\$75,829	\$135,276	\$147,581	\$21,895	\$380,581
Home equity lines of credit	8,184	6,864	2,186	28,581	45,815
Standby letters of credit and financial guarantees <sup>(1)</sup>	21,287	10,535	2,743	1,328	35,893
Letters of credit	1,371	108	76	58	1,613
Legally binding commitments	106,671	152,783	152,586	51,862	463,902
Credit card lines <sup>(2)</sup>	360,848	—	—	—	360,848
Total credit extension commitments	\$467,519	\$152,783	\$152,586	\$51,862	\$824,750
	December 31, 2016				
Notional amount of credit extension commitments					
Loan commitments	\$82,609	\$133,063	\$152,854	\$22,129	\$390,655
Home equity lines of credit	8,806	10,701	2,644	25,050	47,201
Standby letters of credit and financial guarantees <sup>(1)</sup>	19,165	10,754	3,225	1,027	34,171
Letters of credit	1,285	103	114	53	1,555
Legally binding commitments	111,865	154,621	158,837	48,259	473,582
Credit card lines <sup>(2)</sup>	377,773	—	—	—	377,773

Total credit extension commitments \$489,638 \$154,621 \$158,837 \$48,259 \$851,355

The notional amounts of SBLCs and financial guarantees classified as investment grade and non-investment grade (1) based on the credit quality of the underlying reference name within the instrument were \$27.5 billion and \$8.0 billion at June 30, 2017, and \$25.5 billion and \$8.3 billion at December 31, 2016. Amounts in the table include consumer SBLCs of \$397 million and \$376 million at June 30, 2017 and December 31, 2016.

(2) Includes business card unused lines of credit.

Legally binding commitments to extend credit generally have specified rates and maturities. Certain of these commitments have adverse change clauses that help to protect the Corporation against deterioration in the borrower's ability to pay.

#### Other Commitments

At June 30, 2017 and December 31, 2016, the Corporation had commitments to purchase loans (e.g., residential mortgage and commercial real estate) of \$598 million and \$767 million, and commitments to purchase commercial loans of \$2.7 billion and \$636 million, which upon settlement will be included in loans or LHFS.

At June 30, 2017 and December 31, 2016, the Corporation had commitments to purchase commodities, primarily liquefied

natural gas of \$1.6 billion and \$1.9 billion, which upon settlement will be included in trading account assets.

At June 30, 2017 and December 31, 2016, the Corporation had commitments to enter into resale and forward-dated resale and securities borrowing agreements of \$74.2 billion and \$48.9 billion, and commitments to enter into forward-dated repurchase and securities lending agreements of \$41.3 billion and \$24.4 billion. These commitments expire primarily within the next 12 months.

The Corporation has entered into agreements to purchase retail automotive loans from certain auto loan originators. These agreements provide for stated purchase amounts and contain cancellation provisions that allow the Corporation to terminate its commitment to purchase at any time, with a minimum notification period. At June 30, 2017 and December 31, 2016, the

Corporation's maximum purchase commitment was \$345 million and \$475 million. In addition, the Corporation has a commitment to originate or purchase auto loans and leases from a strategic partner up to \$1.5 billion for the remainder of 2017, with this commitment expiring on December 31, 2017.

The Corporation is a party to operating leases for certain of its premises and equipment. Commitments under these leases are approximately \$1.2 billion, \$2.2 billion, \$2.0 billion, \$1.8 billion and \$1.5 billion for the remainder of 2017 and the years through 2021, respectively, and \$5.7 billion in the aggregate for all years thereafter.

#### Other Guarantees

##### Bank-owned Life Insurance Book Value Protection

The Corporation sells products that offer book value protection to insurance carriers who offer group life insurance policies to corporations, primarily banks. At June 30, 2017 and December 31, 2016, the notional amount of these guarantees, which are recorded as derivatives totaled \$14.0 billion and \$13.9 billion. At both June 30, 2017 and December 31, 2016, the Corporation's maximum exposure related to these guarantees totaled \$3.2 billion, with estimated maturity dates between 2031 and 2039. The net fair value including the fee receivable associated with these guarantees was \$2 million and \$4 million at June 30, 2017 and December 31, 2016, and reflects the probability of surrender as well as the multiple structural protection features in the contracts.

##### Merchant Services

In accordance with credit and debit card association rules, the Corporation sponsors merchant processing servicers that process credit and debit card transactions on behalf of various merchants. In connection with these services, a liability may arise in the event of a billing dispute between the merchant and a cardholder that is ultimately resolved in the cardholder's favor. If the merchant defaults on its obligation to reimburse the cardholder, the cardholder, through its issuing bank, generally has until six months after the date of the transaction to present a chargeback to the merchant processor, which is primarily liable for any losses on covered transactions. However, if the merchant processor fails to meet its obligation to reimburse the cardholder for disputed transactions, then the Corporation, as the sponsor, could be held liable for the disputed amount. For the three and six months ended June 30, 2017, the sponsored entities processed and settled \$204.6 billion and \$391.4 billion of transactions and recorded losses of \$8 million and \$15 million. For the three and six months ended June 30, 2016, the sponsored entities processed and settled \$178.4 billion and \$337.8 billion of transactions and recorded losses of \$8 million and \$14 million. A significant portion of this activity was processed by a joint venture in which the Corporation holds a 49 percent ownership, and is recorded in other assets on the Consolidated Balance Sheet and in All Other. At both June 30, 2017 and December 31, 2016, the carrying value of the Corporation's investment in the merchant services joint venture was \$2.9 billion.

As of June 30, 2017 and December 31, 2016, the maximum potential exposure for sponsored transactions totaled \$323.8 billion and \$325.7 billion. However, the Corporation believes that the maximum potential exposure is not representative of the actual potential loss exposure and does not expect to make material payments in connection with these guarantees.

#### Other Guarantees

The Corporation has entered into additional guarantee agreements and commitments, including sold risk participation swaps, liquidity facilities, lease-end obligation agreements, partial credit guarantees on certain leases, real estate joint venture guarantees, divested business commitments and sold put options that require gross settlement. The maximum potential future payment under these agreements was approximately \$6.6 billion and \$6.7 billion at June 30, 2017 and December 31, 2016. The estimated maturity dates of these obligations extend up to 2040. The Corporation has made no material payments under these guarantees.

In the normal course of business, the Corporation periodically guarantees the obligations of its affiliates in a variety of transactions including ISDA-related transactions and non-ISDA related transactions such as commodities trading, repurchase agreements, prime brokerage agreements and other transactions.

##### Payment Protection Insurance Claims Matter

On June 1, 2017, the Corporation completed the sale of its non-U.S. consumer credit card business. Included in the calculation of the gain on sale, the Corporation recorded an obligation to indemnify the purchaser for substantially all PPI exposure above reserves assumed by the purchaser.

##### Litigation and Regulatory Matters



The following supplements the disclosure in Note 12 – Commitments and Contingencies to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K and in Note 10 – Commitments and Contingencies to the Consolidated Financial Statements of the Corporation's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2017 (the prior commitments and contingencies disclosure).

In the ordinary course of business, the Corporation and its subsidiaries are routinely defendants in or parties to many pending and threatened legal, regulatory and governmental actions and proceedings.

In view of the inherent difficulty of predicting the outcome of such matters, particularly where the claimants seek very large or indeterminate damages or where the matters present novel legal theories or involve a large number of parties, the Corporation generally cannot predict what the eventual outcome of the pending matters will be, what the timing of the ultimate resolution of these matters will be, or what the eventual loss, fines or penalties related to each pending matter may be.

In accordance with applicable accounting guidance, the Corporation establishes an accrued liability when those matters present loss contingencies that are both probable and estimable. In such cases, there may be an exposure to loss in excess of any amounts accrued. As a matter develops, the Corporation, in conjunction with any outside counsel handling the matter, evaluates on an ongoing basis whether such matter presents a loss contingency that is probable and estimable. Once the loss contingency is deemed to be both probable and estimable, the Corporation will establish an accrued liability and record a corresponding amount of litigation-related expense. The Corporation continues to monitor the matter for further developments that could affect the amount of the accrued liability that has been previously established. Excluding expenses of internal and external legal service providers, litigation-related expense of \$192 million and \$466 million was recognized for the three and six months ended June 30, 2017 compared to \$270 million and \$658 million for the same periods in 2016.

For a limited number of the matters disclosed in this Note, and in the prior commitments and contingencies disclosure, for which a loss, whether in excess of a related accrued liability or where there is no accrued liability, is reasonably possible in future periods, the Corporation is able to estimate a range of possible loss. In determining whether it is possible to estimate a range of possible loss, the Corporation reviews and evaluates its matters on an ongoing basis, in conjunction with any outside counsel handling the matter, in light of potentially relevant factual and legal developments. In cases in which the Corporation possesses sufficient appropriate information to estimate a range of possible loss, that estimate is aggregated and disclosed below. There may be other disclosed matters for which a loss is probable or reasonably possible but such an estimate of the range of possible loss may not be possible. For those matters where an estimate of the range of possible loss is possible, management currently estimates the aggregate range of possible loss is \$0 to \$1.5 billion in excess of the accrued liability (if any) related to those matters. This estimated range of possible loss is based upon currently available information and is subject to significant judgment and a variety of assumptions, and known and unknown uncertainties. The matters underlying the estimated range will change from time to time, and actual results may vary significantly from the current estimate. Therefore, this estimated range of possible loss represents what the Corporation believes to be an estimate of possible loss only for certain matters meeting these criteria. It does not represent the Corporation's maximum loss exposure. Information is provided below, or in the prior commitments and contingencies disclosure, regarding the nature of all of these contingencies and, where specified, the amount of the claim associated with these loss contingencies. Based on current knowledge, management does not believe that loss contingencies arising from pending matters, including the matters described herein and in the prior commitments and contingencies disclosure, will have a material adverse effect on the consolidated financial position or liquidity of the Corporation. However, in light of the inherent uncertainties involved in these matters, some of which are beyond the Corporation's control, and the very large or indeterminate damages sought in some of these matters, an adverse outcome in one or more of these matters could be material to the Corporation's results of operations or liquidity for any particular reporting period.

#### Bond Insurance Litigation

##### Ambac v. Countrywide I

On May 16, 2017, the First Department issued its decision on the parties' summary judgment cross-appeals. Among other things,

the First Department reversed on the applicability of New York insurance law to Ambac's common-law fraud claim, ruling that Ambac must prove all of the elements of its fraudulent inducement claim, including justifiable reliance and loss causation; reversed as to Ambac's remedy for its breach of contract claims, finding that Ambac's sole remedy is the repurchase protocol of cure, repurchases, or substitution of any materially defective loan; affirmed the trial court's ruling that Ambac's compensatory damages claim was an impermissible request for rescissory damages; reversed the dismissal of Ambac's claim for reimbursement of claims payments, but affirmed the dismissal of Ambac's claim for reimbursements of attorneys' fees; and reversed as to the meaning of specific representations and warranties, ruling that disputed issues of fact precluded summary judgment. On July 25, 2017, the First Department granted Ambac's motion for leave to appeal to the Court of Appeals. Separately, the First Department reversed summary judgment for Ambac on the continuity-of-ownership element of its New York law de facto merger claim and remanded for fact issues, while concluding that no continuity of ownership exists where the asset-seller receives fair value, and that the fair value element requires the asset-seller's shareholders to acquire their shares in the buyer as an element of the asset purchase transaction; reversed and dismissed Ambac's claim that the Corporation impliedly assumed Countrywide's liabilities; affirmed the ruling that fact issues preclude summary judgment on Ambac's alter-ego claim; and ruled that New York law applies to the de facto merger determination.

##### Ambac v. Countrywide III

On June 30, 2017, the Wisconsin Supreme Court reversed the decision of the Wisconsin Court of Appeals and held that Countrywide did not consent to the jurisdiction of the Wisconsin courts by registering to do business in Wisconsin. It remanded the case to the Court of Appeals for further consideration of whether specific jurisdiction exists for this matter.

#### U.S. Bank -- Harborview Repurchase Litigation

On June 12, 2017, U.S. Bank filed an Amended Petition in the Minnesota Action informing the court that, while a vote of the certificate-holders supports acceptance of the proposed settlement, an expert engaged by U.S. Bank concluded that the proposed settlement amount fell below what the expert considers to be a reasonable settlement range and recommended that U.S. Bank reject the proposed settlement. As a result, the Amended Petition seeks authorization from the Minnesota court to reject the proposed settlement and to continue the litigation in New York state court.

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NOTE 11 Shareholders' Equity  
Common Stock

Declared Quarterly Cash Dividends on Common Stock <sup>(1)</sup>

Declaration Date	Record Date	Payment Date	Dividend Per Share
July 26, 2017	September 1, 2017	September 29, 2017	\$ 0.12
April 26, 2017	June 2, 2017	June 30, 2017	0.075
January 26, 2017	March 3, 2017	March 31, 2017	0.075

<sup>(1)</sup> In 2017 and through July 31, 2017.

On June 28, 2017, following the Federal Reserve's non-objection to the Corporation's 2017 Comprehensive Capital Analysis and Review (CCAR) capital plan, the Board of Directors authorized the repurchase of \$12.9 billion in common stock from July 1, 2017 through June 30, 2018, including approximately \$900 million to offset the effect of equity-based compensation plans during the same period. The common stock repurchase authorization includes both common stock and warrants. The Corporation's 2017 capital plan also included a request to increase the quarterly common stock dividend from \$0.075 per share to \$0.12 per share.

On January 13, 2017, the Corporation announced a plan to repurchase \$1.8 billion of common stock during the first half of 2017, to which the Federal Reserve did not object, in addition to the previously announced repurchases associated with the 2016 CCAR capital plan. During the three and six months ended June 30, 2017, the Corporation repurchased and retired 96 million and 211 million shares of common stock, which reduced shareholders' equity by \$2.2 billion and \$5.0 billion, respectively.

The Corporation has warrants outstanding and exercisable to purchase 122 million shares of its common stock expiring on

October 28, 2018, and warrants outstanding and exercisable to purchase 150 million shares of common stock expiring on January 16, 2019. These warrants were originally issued in connection with preferred stock issuances to the U.S. Department of the Treasury in 2009 and 2008, and are listed on the New York Stock Exchange. The exercise price of the warrants expiring on January 16, 2019 is subject to continued adjustment each time the quarterly cash dividend is in excess of \$0.01 per common share to compensate the holders of the warrants for dilution resulting from an increased dividend. As a result of the Corporation's second-quarter 2017 dividend of \$0.075 per common share, the exercise price of the warrants expiring on January 16, 2019 was adjusted to \$12.867 per share. The warrants expiring on October 28, 2018, which have an exercise price of \$30.79 per share, also contain this anti-dilution provision except the adjustment is triggered only when the Corporation declares quarterly dividends at a level greater than \$0.32 per common share.

During the six months ended June 30, 2017, in connection with employee stock plans, the Corporation issued approximately 60 million shares and repurchased approximately 24 million shares of its common stock to satisfy tax withholding obligations. At June 30, 2017, the Corporation had reserved 1.6 billion unissued shares of common stock for future issuances under employee stock plans, common stock warrants, convertible notes and preferred stock.

Preferred Stock

During the three months ended March 31, 2017 and June 30, 2017, the Corporation declared \$502 million and \$361 million of cash dividends on preferred stock, or a total of \$863 million for the six months ended June 30, 2017. There were no issuances of preferred stock during the six months ended June 30, 2017.

## NOTE 12 Accumulated Other Comprehensive Income (Loss)

The table below presents the changes in accumulated OCI after-tax for the six months ended June 30, 2017 and 2016.

(Dollars in millions)	Debt Securities	Available-for-Sale Marketable Equity Securities	Debit Valuation Adjustments	Derivatives	Employee Benefit Plans	Foreign Currency (1)	Total
Balance, December 31, 2015	\$ 16	\$ 62	\$ (611 )	\$ (1,077 )	\$ (2,956 )	\$ (792 )	\$ (5,358)
Net change	3,164	(53 )	114	150	23	(9 )	3,389
Balance, June 30, 2016	\$ 3,180	\$ 9	\$ (497 )	\$ (927 )	\$ (2,933 )	\$ (801 )	\$ (1,969)
Balance, December 31, 2016	\$ (1,299 )	\$ 32	\$ (767 )	\$ (895 )	\$ (3,480 )	\$ (879 )	\$ (7,288)
Net change	457	12	(69 )	132	54	97	683
Balance, June 30, 2017	\$ (842 )	\$ 44	\$ (836 )	\$ (763 )	\$ (3,426 )	\$ (782 )	\$ (6,605)

The table below presents the net change in fair value recorded in accumulated OCI, net realized gains and losses reclassified into earnings and other changes for each component of OCI before- and after-tax for the six months ended June 30, 2017 and 2016.

## Changes in OCI Components Before- and After-tax

(Dollars in millions)	Six Months Ended June 30					
	2017		2016			
	Before-tax	Tax effect	After-tax	Before-tax	Tax effect	After-tax
Debt securities:						
Net increase in fair value	\$846	\$(315)	\$ 531	\$5,530	\$(2,101)	\$ 3,429
Reclassifications into earnings:						
Gains on sales of debt securities	(153 )	58	(95 )	(439 )	167	(272 )
Other income	33	(12 )	21	12	(5 )	7
Net realized gains reclassified into earnings	(120 )	46	(74 )	(427 )	162	(265 )
Net change	726	(269 )	457	5,103	(1,939 )	3,164
Available-for-sale marketable equity securities:						
Net increase (decrease) in fair value	39	(15 )	24	(86 )	33	(53 )
Net realized gains reclassified into earnings (2)	(20 )	8	(12 )	—	—	—
Net change	19	(7 )	12	(86 )	33	(53 )
Debit valuation adjustments:						
Net increase (decrease) in fair value	(111 )	33	(78 )	172	(65 )	107
Net realized losses reclassified into earnings (2)	14	(5 )	9	12	(5 )	7
Net change	(97 )	28	(69 )	184	(70 )	114
Derivatives:						
Net increase (decrease) in fair value	61	(22 )	39	(141 )	53	(88 )
Reclassifications into earnings:						
Net interest income	220	(83 )	137	328	(123 )	205
Personnel	(71 )	27	(44 )	53	(20 )	33
Net realized losses reclassified into earnings	149	(56 )	93	381	(143 )	238
Net change	210	(78 )	132	240	(90 )	150
Employee benefit plans:						
Reclassifications into earnings:						
Prior service cost	2	—	2	2	—	2
Net actuarial losses	83	(31 )	52	48	(19 )	29

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Net realized losses reclassified into earnings <sup>(3)</sup>	85	(31	) 54	50	(19	) 31
Settlements, curtailments and other	—	—	—	—	(8	) (8
Net change	85	(31	) 54	50	(27	) 23
Foreign currency:						
Net increase (decrease) in fair value	(332	) 336	4	40	(49	) (9
Net gains reclassified into earnings <sup>(1,2)</sup>	(612	) 705	93	—	—	—
Net change	(944	) 1,041	97	40	(49	) (9
Total other comprehensive income (loss)	\$(1	) \$684	\$ 683	\$5,531	\$(2,142)	\$ 3,389

(1) The six months ended June 30, 2017 included a pre-tax gain on derivatives and related income tax expense associated with the Corporation's net investment in its non-U.S. consumer credit card business, which was sold on June 1, 2017. The derivative gain was partially offset by a loss on the related foreign currency translation adjustment.

(2) Reclassifications of pre-tax AFS marketable equity securities, DVA and foreign currency are recorded in other income in the Consolidated Statement of Income.

(3) Reclassifications of pre-tax employee benefit plan costs are recorded in personnel expense in the Consolidated Statement of Income.

## NOTE 13 Earnings Per Common Share

The calculation of earnings per common share (EPS) and diluted EPS for the three and six months ended June 30, 2017 and 2016 is presented below. For more information on the calculation of EPS, see Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.

	Three Months		Six Months Ended	
	Ended June 30		June 30	
(Dollars in millions, except per share information; shares in thousands)	2017	2016	2017	2016
Earnings per common share				
Net income	\$5,269	\$ 4,783	\$10,125	\$ 8,255
Preferred stock dividends	(361 )	(361 )	(863 )	(818 )
Net income applicable to common shareholders	\$4,908	\$ 4,422	\$9,262	\$ 7,437
Average common shares issued and outstanding	10,013,500	10,328,424	10,056,111	10,308,241
Earnings per common share	\$0.49	\$ 0.43	\$0.92	\$ 0.72
Diluted earnings per common share				
Net income applicable to common shareholders	\$4,908	\$ 4,422	\$9,262	\$ 7,437
Add preferred stock dividends due to assumed conversions	75	75	150	150
Net income allocated to common shareholders	\$4,983	\$ 4,497	\$9,412	\$ 7,587
Average common shares issued and outstanding	10,013,500	10,328,424	10,056,111	10,308,241
Dilutive potential common shares <sup>(1)</sup>	808,566	730,743	812,320	771,698
Total diluted average common shares issued and outstanding	10,822,066	11,059,167	10,868,431	11,079,939
Diluted earnings per common share	\$0.46	\$ 0.41	\$0.87	\$ 0.68

<sup>(1)</sup> Includes incremental dilutive shares from restricted stock units, restricted stock and warrants.

The Corporation previously issued a warrant to purchase 700 million shares of the Corporation's common stock to the holder of the Series T Preferred Stock. The warrant may be exercised, at the option of the holder, through tendering the Series T Preferred Stock or paying cash. For both the three and six months ended June 30, 2017 and 2016, the 700 million average dilutive potential common shares were included in the diluted share count under the "if-converted" method.

For both the three and six months ended June 30, 2017 and 2016, 62 million average dilutive potential common shares associated with the Series L Preferred Stock were not included in the diluted share count because the result would have been antidilutive under the "if-converted" method. For the three and six months ended June 30, 2017, average options to purchase 18 million and 24 million shares of common stock were outstanding but not included in the computation of EPS because the result would have been antidilutive under the treasury stock method compared to 42 million and 48 million for the same periods in 2016. For both the three and six months ended June 30, 2017 and 2016, average warrants to purchase 122 million shares of common stock were outstanding but not included in the computation of EPS because the result would have been antidilutive under the treasury stock method, and average warrants to purchase 150 million shares of common stock were included in the diluted EPS calculation under the treasury stock method.

## NOTE 14 Fair Value Measurements

Under applicable accounting standards, fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. The Corporation determines the fair values of its financial instruments under applicable accounting standards and conducts a review of its fair value hierarchy classifications on a quarterly basis. Transfers into or out of fair value hierarchy classifications are considered to be effective as of the beginning of the quarter in which they occur. During the six months ended June 30, 2017, there were no changes to valuation approaches or techniques that had, or are expected to have, a material impact on the

Corporation's consolidated financial position or results of operations.

For more information regarding the fair value hierarchy and how the Corporation measures fair value and valuation processes and techniques see Note 1 – Summary of Significant Accounting Principles and Note 20 – Fair Value Measurements to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K. The Corporation accounts for certain financial instruments under the fair value option. For additional information, see Note 15 – Fair Value Option.

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## Recurring Fair Value

Assets and liabilities carried at fair value on a recurring basis at June 30, 2017 and December 31, 2016, including financial instruments which the Corporation accounts for under the fair value option, are summarized in the following tables.

(Dollars in millions)	June 30, 2017 Fair Value Measurements			Netting Adjustments (1)	Assets/Liabilities at Fair Value
	Level 1	Level 2	Level 3		
<b>Assets</b>					
Federal funds sold and securities borrowed or purchased under agreements to resell	\$—	\$50,758	\$—	\$—	\$ 50,758
Trading account assets:					
U.S. Treasury and agency securities <sup>(2)</sup>	40,147	776	—	—	40,923
Corporate securities, trading loans and other	259	28,313	1,777	—	30,349
Equity securities	60,435	27,568	229	—	88,232
Non-U.S. sovereign debt	13,451	13,927	506	—	27,884
Mortgage trading loans, MBS and ABS:					
U.S. government-sponsored agency guaranteed <sup>(2)</sup>	—	19,530	—	—	19,530
Mortgage trading loans, ABS and other MBS	—	8,219	1,232	—	9,451
Total trading account assets <sup>(3)</sup>	114,292	98,333	3,744	—	216,369
Derivative assets <sup>(4)</sup>	7,156	499,252	3,970	(471,188 )	39,190
AFS debt securities:					
U.S. Treasury and agency securities	49,793	1,630	—	—	51,423
Mortgage-backed securities:					
Agency	—	192,174	—	—	192,174
Agency-collateralized mortgage obligations	—	7,484	—	—	7,484
Non-agency residential	—	1,914	—	—	1,914
Commercial	—	12,441	—	—	12,441
Non-U.S. securities	1,998	4,465	139	—	6,602
Other taxable securities	—	8,568	483	—	9,051
Tax-exempt securities	—	17,959	518	—	18,477
Total AFS debt securities	51,791	246,635	1,140	—	299,566
Other debt securities carried at fair value:					
Mortgage-backed securities:					
Agency-collateralized mortgage obligations	—	5	—	—	5
Non-agency residential	—	3,014	23	—	3,037
Non-U.S. securities	11,305	1,360	—	—	12,665
Other taxable securities	—	236	—	—	236
Total other debt securities carried at fair value	11,305	4,615	23	—	15,943
Loans and leases	—	6,658	667	—	7,325
Mortgage servicing rights <sup>(5)</sup>	—	—	2,501	—	2,501
Loans held-for-sale	—	1,941	766	—	2,707
Customer and other receivables	—	250	—	—	250
Other assets	13,443	1,128	294	—	14,865
Total assets	\$197,987	\$909,570	\$13,105	\$(471,188 )	\$ 649,474
<b>Liabilities</b>					
Interest-bearing deposits in U.S. offices	\$—	\$456	\$—	\$—	\$ 456
	—	31,997	135	—	32,132

Federal funds purchased and securities loaned or sold  
under agreements to repurchase

Trading account liabilities:

U.S. Treasury and agency securities	17,531	407	—	—	17,938
Equity securities	29,099	4,045	—	—	33,144
Non-U.S. sovereign debt	13,940	3,303	—	—	17,243
Corporate securities and other	213	9,373	22	—	9,608
Total trading account liabilities	60,783	17,128	22	—	77,933
Derivative liabilities <sup>(4)</sup>	6,827	501,925	5,773	(479,645 )	34,880
Short-term borrowings	—	1,572	—	—	1,572
Accrued expenses and other liabilities	15,968	1,301	9	—	17,278
Long-term debt	—	27,427	1,646	—	29,073
Total liabilities	\$83,578	\$581,806	\$7,585	\$(479,645 )	\$ 193,324

(1) Amounts represent the impact of legally enforceable master netting agreements and also cash collateral held or placed with the same counterparties.

(2) Includes \$20.1 billion of GSE obligations.

(3) Includes securities with a fair value of \$15.1 billion that were segregated in compliance with securities regulations or deposited with clearing organizations. This amount is included in the parenthetical disclosure on the Consolidated Balance Sheet.

(4) During the six months ended June 30, 2017, \$1.8 billion of derivative assets and \$1.1 billion of derivative liabilities were transferred from Level 1 to Level 2 and \$373 million of derivative assets and \$335 million of derivative liabilities were transferred from Level 2 to Level 1 based on the inputs used to measure fair value. For further disaggregation of derivative assets and liabilities, see Note 2 – Derivatives.

(5) MSR include the \$1.8 billion core MSR portfolio held in Consumer Banking, the \$211 million non-core MSR portfolio held in All Other and the \$505 million non-U.S. MSR portfolio held in Global Markets.

(Dollars in millions)	December 31, 2016 Fair Value Measurements			Netting Adjustments (1)	Assets/Liabilities at Fair Value
	Level 1	Level 2	Level 3		
<b>Assets</b>					
Federal funds sold and securities borrowed or purchased under agreements to resell	\$—	\$49,750	\$—	\$—	\$ 49,750
Trading account assets:					
U.S. Treasury and agency securities <sup>(2)</sup>	34,587	1,927	—	—	36,514
Corporate securities, trading loans and other	171	22,861	2,777	—	25,809
Equity securities	50,169	21,601	281	—	72,051
Non-U.S. sovereign debt	9,578	9,940	510	—	20,028
Mortgage trading loans, MBS and ABS:					
U.S. government-sponsored agency guaranteed <sup>(2)</sup>	—	15,799	—	—	15,799
Mortgage trading loans, ABS and other MBS	—	8,797	1,211	—	10,008
Total trading account assets <sup>(3)</sup>	94,505	80,925	4,779	—	180,209
Derivative assets <sup>(4)</sup>	7,337	619,848	3,931	(588,604 )	42,512
AFS debt securities:					
U.S. Treasury and agency securities	46,787	1,465	—	—	48,252
Mortgage-backed securities:					
Agency	—	189,486	—	—	189,486
Agency-collateralized mortgage obligations	—	8,330	—	—	8,330
Non-agency residential	—	2,013	—	—	2,013
Commercial	—	12,322	—	—	12,322
Non-U.S. securities	1,934	3,600	229	—	5,763
Other taxable securities	—	10,020	594	—	10,614
Tax-exempt securities	—	16,618	542	—	17,160
Total AFS debt securities	48,721	243,854	1,365	—	293,940
Other debt securities carried at fair value:					
Mortgage-backed securities:					
Agency-collateralized mortgage obligations	—	5	—	—	5
Non-agency residential	—	3,114	25	—	3,139
Non-U.S. securities	15,109	1,227	—	—	16,336
Other taxable securities	—	240	—	—	240
Total other debt securities carried at fair value	15,109	4,586	25	—	19,720
Loans and leases	—	6,365	720	—	7,085
Mortgage servicing rights <sup>(5)</sup>	—	—	2,747	—	2,747
Loans held-for-sale	—	3,370	656	—	4,026
Debt securities in assets of business held for sale	619	—	—	—	619
Other assets	11,824	1,739	239	—	13,802
Total assets	\$ 178,115	\$ 1,010,437	\$ 14,462	\$ (588,604 )	\$ 614,410
<b>Liabilities</b>					
Interest-bearing deposits in U.S. offices	\$—	\$731	\$—	\$—	\$ 731
Federal funds purchased and securities loaned or sold under agreements to repurchase	—	35,407	359	—	35,766
Trading account liabilities:					
U.S. Treasury and agency securities	15,854	197	—	—	16,051
Equity securities	25,884	3,014	—	—	28,898

Non-U.S. sovereign debt	9,409	2,103	—	—	11,512
Corporate securities and other	163	6,380	27	—	6,570
Total trading account liabilities	51,310	11,694	27	—	63,031
Derivative liabilities <sup>(4)</sup>	7,173	615,896	5,244	(588,833 )	39,480
Short-term borrowings	—	2,024	—	—	2,024
Accrued expenses and other liabilities	12,978	1,643	9	—	14,630
Long-term debt	—	28,523	1,514	—	30,037
Total liabilities	\$71,461	\$695,918	\$7,153	\$(588,833 )	\$ 185,699

(1) Amounts represent the impact of legally enforceable master netting agreements and also cash collateral held or placed with the same counterparties.

(2) Includes \$17.5 billion of GSE obligations.

(3) Includes securities with a fair value of \$14.6 billion that were segregated in compliance with securities regulations or deposited with clearing organizations. This amount is included in the parenthetical disclosure on the Consolidated Balance Sheet.

(4) During 2016, \$2.3 billion of derivative assets and \$2.4 billion of derivative liabilities were transferred from Level 1 to Level 2 and \$2.0 billion of derivative assets and \$1.8 billion of derivative liabilities were transferred from Level 2 to Level 1 based on the inputs used to measure fair value. For further disaggregation of derivative assets and liabilities, see Note 2 – Derivatives.

(5) MSRs include the \$2.1 billion core MSR portfolio held in Consumer Banking, the \$212 million non-core MSR portfolio held in All Other and the \$469 million non-U.S. MSR portfolio held in Global Markets.

The following tables present a reconciliation of all assets and liabilities measured at fair value on a recurring basis using significant unobservable inputs (Level 3) during the three and six months ended June 30, 2017 and 2016, including net realized and unrealized gains (losses) included in earnings and accumulated OCI.

Level 3 – Fair Value Measurements<sup>(1)</sup>

(Dollars in millions)	Three Months Ended June 30, 2017										
	Gross										
	Balance April 1 2017	Total Realized/ Gains/(Losses) (2)	Gains (Losses) Unrealized in OCI (3)	Purchases	Sales	Issuances	Settlements	Gross Transfers into Level 3	Gross Transfers out of Level 3	Balance June 30 2017	Change in Unrealized Gains/(Losses) Related to Financial Instruments Still Held (2)
Trading account assets:											
Corporate securities, trading loans and other	\$2,029	\$ 64	\$ —	\$119	\$(120)	\$ —	\$(108)	\$ 143	\$(350)	\$1,777	\$ 30
Equity securities	288	3	—	22	(47)	—	—	30	(67)	229	—
Non-U.S. sovereign debt	527	12	(16)	26	(50)	—	(62)	69	—	506	12
Mortgage trading loans, ABS and other MBS	1,215	78	(1)	258	(314)	—	(69)	76	(11)	1,232	53
Total trading account assets	4,059	157	(17)	425	(531)	—	(239)	318	(428)	3,744	95
Net derivative assets <sup>(4)</sup>	(1,665)	(372)	—	208	(229)	—	274	—	(19)	(1,803)	(368)
AFS debt securities:											
Non-U.S. securities	207	1	9	22	—	—	(100)	—	—	139	—
Other taxable securities	579	—	1	5	—	—	(8)	—	(94)	483	—
Tax-exempt securities	520	—	(2)	—	—	—	—	—	—	518	—
Total AFS debt securities	1,306	1	8	27	—	—	(108)	—	(94)	1,140	—
Other debt securities carried at fair value – Non-agency residential MBS											
Loans and leases <sup>(5, 6)</sup>	702	6	—	—	—	—	(34)	—	(7)	667	6
Mortgage servicing rights <sup>(6, 7)</sup>	2,610	13	—	—	1	63	(186)	—	—	2,501	(65)
Loans held-for-sale <sup>(5)</sup>	792	42	(9)	2	(19)	—	(128)	100	(14)	766	26
Other assets	231	(11)	12	2	—	—	(4)	64	—	294	(6)
Federal funds purchased and securities loaned or sold under agreements to repurchase <sup>(5)</sup>	(226)	(6)	—	—	—	(10)	8	(58)	157	(135)	(6)
Trading account liabilities – Corporate securities and other	(35)	10	—	4	—	(1)	—	—	—	(22)	(1)
Accrued expenses and other liabilities <sup>(5)</sup>	(9)	—	—	—	—	—	—	—	—	(9)	—
Long-term debt <sup>(5)</sup>	(1,660)	10	(18)	7	—	(20)	124	(108)	19	(1,646)	10

<sup>(1)</sup> Assets (liabilities). For assets, increase (decrease) to Level 3 and for liabilities, (increase) decrease to Level 3.

<sup>(2)</sup> Includes gains/losses reported in earnings in the following income statement line items: Trading account assets/liabilities - trading account profits (losses); Net derivative assets - primarily trading account profits (losses)

and mortgage banking income (loss); MSRs - primarily mortgage banking income (loss); Long-term debt - primarily trading account profits (losses). For MSRs, the amounts reflect the changes in modeled MSR fair value due to observed changes in interest rates, volatility, spreads and the shape of the forward swap curve, and periodic adjustments to the valuation model to reflect changes in the modeled relationships between inputs and projected cash flows, as well as changes in cash flow assumptions including cost to service.

- Includes gains/losses in OCI related to unrealized gains/losses on AFS securities, foreign currency translation adjustments and the impact of changes in the Corporation's credit spreads on long-term debt accounted for under the fair value option. For additional information, see Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.
- (3) Net derivatives include derivative assets of \$4.0 billion and derivative liabilities of \$5.8 billion.
  - (4) Amounts represent instruments that are accounted for under the fair value option.
  - (5) Issuances represent loan originations and MSRs recognized following securitizations or whole-loan sales.
  - (6) Settlements represent the net change in fair value of the MSR asset due to the recognition of modeled cash flows and the passage of time.

Significant transfers into Level 3, primarily due to decreased price observability, during the three months ended June 30, 2017 included \$318 million of trading account assets, \$100 million of LHFS and \$108 million of long-term debt. Transfers occur on a regular basis for long-term debt instruments due to changes in the impact of unobservable inputs on the value of the embedded derivative in relation to the instrument as a whole.

Significant transfers out of Level 3, primarily due to increased price observability, during the three months ended June 30, 2017 included \$428 million of trading account assets and \$157 million of federal funds purchased and securities loaned or sold under agreements to repurchase.

Level 3 – Fair Value Measurements<sup>(1)</sup>

Three Months Ended June 30, 2016  
Gross

(Dollars in millions)	Balance April 1 2016	Total Realized/Unrealized Gains/(Losses) (2)	Gains (Losses) in OCI (3)	Purchases	Sales	Issuances	Settlements	Gross Transfers to Level 3	Gross Transfers out of Level 3	Balance June 30 2016	Change in Unrealized Gains/(Losses) Related to Financial Instruments Still Held (2)
<b>Trading account assets:</b>											
Corporate securities, trading loans and other	\$2,954	\$ 11	\$ 1	\$472	\$(246)	\$ —	\$(197)	) \$ 72	\$(413)	\$2,654	\$ (52)
Equity securities	417	22	—	33	(35)	—	(10)	) 29	(1)	455	20
Non-U.S. sovereign debt	572	50	49	—	—	—	(41)	) —	—	630	50
Mortgage trading loans, ABS and other MBS	1,614	67	—	156	(419)	—	(94)	) 45	(83)	1,286	41
Total trading account assets	5,557	150	50	661	(700)	—	(342)	) 146	(497)	5,025	59
Net derivative assets <sup>(4)</sup>	(315)	)84	—	110	(444)	—	(123)	) (8)	) 48	(648)	) (49)
<b>AFS debt securities:</b>											
Non-agency residential MBS	150	—	(2)	) 61	—	—	(75)	) —	—	134	—
Other taxable securities	739	1	(3)	) —	—	—	(20)	) —	—	717	—
Tax-exempt securities	562	—	(3)	) —	—	—	—	) —	—	559	—
Total AFS debt securities	1,451	1	(8)	) 61	—	—	(95)	) —	—	1,410	—
<b>Other debt securities carried at fair value – Non-agency residential MBS</b>											
Loans and leases <sup>(5, 6)</sup>	1,697	(47)	) —	—	—	25	(54)	) 1	(163)	1,459	(44)
Mortgage servicing rights <sup>(6, 7)</sup>	2,631	(228)	) —	—	(1)	) 72	(205)	) —	—	2,269	(282)
Loans held-for-sale <sup>(5)</sup>	660	11	28	—	(17)	—	(18)	) 26	—	690	8
Other assets	375	(13)	) —	—	—	—	(14)	) —	—	348	(11)
Federal funds purchased and securities loaned or sold under agreements to repurchase <sup>(5)</sup>	(345)	) 32	—	—	—	—	—	—	—	(313)	) 31
<b>Trading account liabilities –</b>											
Corporate securities and other	(28)	) 1	—	1	—	—	—	—	—	(26)	) 1
Accrued expenses and other liabilities <sup>(5)</sup>	(9)	) —	—	—	—	—	—	—	—	(9)	) —
Long-term debt <sup>(5)</sup>	(1,814)	) (79)	) (11)	) 20	—	(154)	77	(359)	) 164	(2,156)	) (79)

<sup>(1)</sup> Assets (liabilities). For assets, increase (decrease) to Level 3 and for liabilities, (increase) decrease to Level 3.

<sup>(2)</sup> Includes gains/losses reported in earnings in the following income statement line items: Trading account assets/liabilities - trading account profits (losses); Net derivative assets - primarily trading account profits (losses) and mortgage banking income (loss); MSRs - primarily mortgage banking income (loss); Long-term debt - primarily trading account profits (losses). For MSRs, the amounts reflect the changes in modeled MSR fair value

- due principally to observed changes in interest rates, volatility, spreads and the shape of the forward swap curve. Includes gains/losses in OCI related to unrealized gains/losses on AFS securities, foreign currency translation adjustments and the impact of changes in the Corporation's credit spreads on long-term debt accounted for under the fair value option. For additional information, see Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.
- (3) Net derivatives include derivative assets of \$5.2 billion and derivative liabilities of \$5.8 billion.
  - (4) Amounts represent instruments that are accounted for under the fair value option.
  - (5) Issuances represent loan originations and MSRs recognized following securitizations or whole-loan sales.
  - (6) Settlements represent the net change in fair value of the MSR asset due to the recognition of modeled cash flows and the passage of time.

Significant transfers into Level 3, primarily due to decreased price observability, during the three months ended June 30, 2016 included \$146 million of trading account assets and \$359 million of long-term debt. Transfers occur on a regular basis for long-term debt instruments due to changes in the impact of unobservable inputs on the value of the embedded derivative in relation to the instrument as a whole.

Significant transfers out of Level 3, primarily due to increased price observability, during the three months ended June 30, 2016 included \$497 million of trading account assets, \$163 million of loans and leases and \$164 million of long-term debt.



Level 3 – Fair Value Measurements<sup>(1)</sup>

Six Months Ended June 30, 2017

Gross

(Dollars in millions)	Balance Total		Gains		Purchases	Sales	Issuances	Settlements	Gross Transfers to Level 3	Gross Transfers out of Level 3	Balance June 30, 2017	Change in Unrealized Gains/(Losses) Related to Financial Instruments Still Held <sup>(2)</sup>
	January 1, 2017	Realized Gains/(Losses) <sup>(2)</sup>	Unrealized in OCI <sup>(3)</sup>	(Losses) in OCI <sup>(3)</sup>								
Trading account assets:												
Corporate securities, trading loans and other	\$2,777	\$ 148	\$ —	\$318	\$(600)	\$ —	\$(235)	\$ 218	\$ (849)	\$1,777	\$ 57	
Equity securities	281	15	—	42	(64)	—	(10)	102	(137)	229	(1)	
Non-U.S. sovereign debt	510	31	(6)	26	(59)	—	(68)	72	—	506	27	
Mortgage trading loans, ABS and other MBS	1,211	185	(1)	597	(689)	—	(123)	104	(52)	1,232	117	
Total trading account assets	4,779	379	(7)	983	(1,412)	—	(436)	496	(1,038)	3,744	200	
Net derivative assets <sup>(4)</sup>	(1,313)	(846)	—	408	(476)	—	444	29	(49)	(1,803)	(773)	
AFS debt securities:												
Non-U.S. securities	229	1	12	42	—	—	(145)	—	—	139	—	
Other taxable securities	594	3	5	5	—	—	(30)	—	(94)	483	—	
Tax-exempt securities	542	—	—	—	(56)	—	(3)	35	—	518	—	
Total AFS debt securities	1,365	4	17	47	(56)	—	(178)	35	(94)	1,140	—	
Other debt securities carried at fair value – Non-agency residential MBS												
Loans and leases <sup>(5, 6)</sup>	720	18	—	—	—	—	(64)	—	(7)	667	16	
Mortgage servicing rights <sup>(6, 7)</sup>	2,747	(14)	—	—	6	138	(376)	—	—	2,501	(182)	
Loans held-for-sale <sup>(5)</sup>	656	71	(3)	2	(155)	—	(188)	415	(32)	766	71	
Other assets	239	(17)	12	2	—	—	(6)	64	—	294	(12)	
Federal funds purchased and securities loaned or sold under agreements to repurchase <sup>(5)</sup>	(359)	(5)	—	—	—	(12)	36	(58)	263	(135)	(3)	
Trading account liabilities –												
Corporate securities and other	(27)	12	—	4	(10)	(1)	—	—	—	(22)	(1)	
Accrued expenses and other liabilities <sup>(5)</sup>	(9)	—	—	—	—	—	—	—	—	(9)	—	
Long-term debt <sup>(5)</sup>	(1,514)	(73)	(11)	18	—	(150)	283	(286)	87	(1,646)	(38)	

<sup>(1)</sup> Assets (liabilities). For assets, increase (decrease) to Level 3 and for liabilities, (increase) decrease to Level 3.

<sup>(2)</sup> Includes gains/losses reported in earnings in the following income statement line items: Trading account assets/liabilities - trading account profits (losses); Net derivative assets - primarily trading account profits (losses) and mortgage banking income (loss); MSR - primarily mortgage banking income (loss); Long-term debt - primarily trading account profits (losses). For MSRs, the amounts reflect the changes in modeled MSR fair value due to observed changes in interest rates, volatility, spreads and the shape of the forward swap curve, and periodic

adjustments to the valuation model to reflect changes in the modeled relationships between inputs and projected cash flows, as well as changes in cash flow assumptions including cost to service.

- Includes gains/losses in OCI related to unrealized gains/losses on AFS securities, foreign currency translation
- (3) adjustments and the impact of changes in the Corporation's credit spreads on long-term debt accounted for under the fair value option. For additional information, see Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.
  - (4) Net derivatives include derivative assets of \$4.0 billion and derivative liabilities of \$5.8 billion.
  - (5) Amounts represent instruments that are accounted for under the fair value option.
  - (6) Issuances represent loan originations and MSRs recognized following securitizations or whole-loan sales.
  - (7) Settlements represent the net change in fair value of the MSR asset due to the recognition of modeled cash flows and the passage of time.

Significant transfers into Level 3, primarily due to decreased price observability, during the six months ended June 30, 2017 included \$496 million of trading account assets, \$415 million of LHFS and \$286 million of long-term debt.

Transfers occur on a regular basis for long-term debt instruments due to changes in the impact of unobservable inputs on the value of the embedded derivative in relation to the instrument as a whole.

Significant transfers out of Level 3, primarily due to increased price observability, during the six months ended June 30, 2017 included \$1.0 billion of trading account assets and \$263 million of federal funds purchased and securities loaned or sold under agreements to repurchase.

Level 3 – Fair Value Measurements<sup>(1)</sup>

(Dollars in millions)	Six Months Ended June 30, 2016										Change in Unrealized Gains/(Losses) Related to Financial Instruments Still Held (2)
	Balance January 2016	Total Realized/Unrealized Gains/(Losses) (2)	Gains (Losses) in OCI (3)	Purchases	Sales	Issuances	Settlements	Gross Transfers into Level 3	Gross Transfers out of Level 3	Balance June 30 2016	
Trading account assets:											
Corporate securities, trading loans and other	\$2,838	\$ 61	\$ 2	\$699	\$(393)	\$ —	\$(345)	\$ 230	\$(438)	\$2,654	\$ (29)
Equity securities	407	82	—	43	(37)	—	(72)	33	(1)	455	21
Non-U.S. sovereign debt	521	92	98	3	(1)	—	(83)	—	—	630	91
Mortgage trading loans, ABS and other MBS	1,868	95	(2)	350	(823)	—	(167)	76	(111)	1,286	48
Total trading account assets	5,634	330	98	1,095	(1,254)	—	(667)	339	(550)	5,025	131
Net derivative assets <sup>(4)</sup>	(441)	487	—	199	(619)	—	(111)	(124)	(39)	(648)	308
AFS debt securities:											
Non-agency residential MBS	106	—	3	196	(92)	—	(79)	—	—	134	—
Other taxable securities	757	2	(6)	—	—	—	(36)	—	—	717	—
Tax-exempt securities	569	—	(10)	1	—	—	(1)	—	—	559	—
Total AFS debt securities	1,432	2	(13)	197	(92)	—	(116)	—	—	1,410	—
Other debt securities carried at fair value – Non-agency residential MBS											
Loans and leases <sup>(5, 6)</sup>	1,620	(4)	—	69	—	50	(89)	6	(193)	1,459	5
Mortgage servicing rights <sup>(6, 7)</sup>	3,087	(608)	—	—	(2)	208	(416)	—	—	2,269	(719)
Loans held-for-sale <sup>(5)</sup>	787	84	55	20	(180)	—	(52)	39	(63)	690	88
Other assets	374	(38)	—	34	—	—	(24)	2	—	348	(33)
Federal funds purchased and securities loaned or sold under agreements to repurchase <sup>(5)</sup>	(335)	29	—	—	—	(14)	7	—	—	(313)	29
Trading account liabilities –											
Corporate securities and other	(21)	2	—	1	(8)	—	—	—	—	(26)	1
Short-term borrowings <sup>(5)</sup>	(30)	1	—	—	—	—	29	—	—	—	—
Accrued expenses and other liabilities <sup>(5)</sup>	(9)	—	—	—	—	—	—	—	—	(9)	—
Long-term debt <sup>(5)</sup>	(1,513)	(170)	(18)	29	—	(323)	133	(545)	251	(2,156)	(152)

(1) Assets (liabilities). For assets, increase (decrease) to Level 3 and for liabilities, (increase) decrease to Level 3.

(2) Includes gains/losses reported in earnings in the following income statement line items: Trading account assets/liabilities - trading account profits (losses); Net derivative assets - primarily trading account profits (losses) and mortgage banking income (loss); MSRs - primarily mortgage banking income (loss); Long-term debt -

- primarily trading account profits (losses). For MSRs, the amounts reflect the changes in modeled MSR fair value due principally to observed changes in interest rates, volatility, spreads and the shape of the forward swap curve. Includes gains/losses in OCI related to unrealized gains/losses on AFS securities, foreign currency translation
- (3) adjustments and the impact of changes in the Corporation's credit spreads on long-term debt accounted for under the fair value option. For additional information, see Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.
  - (4) Net derivatives include derivative assets of \$5.2 billion and derivative liabilities of \$5.8 billion.
  - (5) Amounts represent instruments that are accounted for under the fair value option.
  - (6) Issuances represent loan originations and MSRs recognized following securitizations or whole-loan sales.
  - (7) Settlements represent the net change in fair value of the MSR asset due to the recognition of modeled cash flows and the passage of time.

Significant transfers into Level 3, primarily due to decreased price observability, during the six months ended June 30, 2016 included \$339 million of trading account assets, \$124 million of net derivative assets and \$545 million of long-term debt. Transfers occur on a regular basis for long-term debt instruments due to changes in the impact of unobservable inputs on the value of the embedded derivative in relation to the instrument as a whole.

Significant transfers out of Level 3, primarily due to increased price observability, during the six months ended June 30, 2016 included \$550 million of trading account assets, \$193 million of loans and leases and \$251 million of long-term debt.

The following tables present information about significant unobservable inputs related to the Corporation's material categories of Level 3 financial assets and liabilities at June 30, 2017 and December 31, 2016.

Quantitative Information about Level 3 Fair Value Measurements at June 30, 2017

(Dollars in millions)					
Financial Instrument	Fair Value	Valuation Technique	Inputs Significant Unobservable Inputs	Ranges of Inputs	Weighted Average
Loans and Securities <sup>(1)</sup> Instruments backed by residential real estate assets	\$945		Yield	0% to 33%	6 %
Trading account assets – Mortgage trading loans, ABS and other MBS	276	Discounted cash flow, Market comparables	Prepayment speed	0% to 22% CPR	13 %
Loans and leases	665		Default rate	0% to 3% CDR	2 %
Loans held-for-sale Instruments backed by commercial real estate assets	4 \$245		Loss severity	0% to 53%	18 %
Trading account assets – Corporate securities, trading loans and other	197	Discounted cash flow, Market comparables	Price	\$0 to \$100	\$65
Trading account assets – Mortgage trading loans, ABS and other MBS	48				
Commercial loans, debt securities and other	\$3,725		Yield	0% to 43%	22 %
Trading account assets – Corporate securities, trading loans and other	1,526		Prepayment speed	10% to 20%	12 %
Trading account assets – Non-U.S. sovereign debt	506		Default rate	3% to 4%	4 %
Trading account assets – Mortgage trading loans, ABS and other MBS	908	Discounted cash flow, Market comparables	Loss severity	35% to 40%	39 %
AFS debt securities – Other taxable securities	21		Duration	0 to 4 years	2 years
Loans and leases	2		Price	\$0 to \$292	\$64
Loans held-for-sale	762				
Auction rate securities	\$1,034		Price	\$10 to \$100	\$94
Trading account assets – Corporate securities, trading loans and other	54 462	Discounted cash flow, Market comparables			

AFS debt securities – Other taxable securities					
AFS debt securities – Tax-exempt securities	518				
MSRs	\$2,501		Weighted-average life, fixed rate <sup>(4)</sup>	0 to 14 years	5 years
			Weighted-average life, variable rate <sup>(4)</sup>	0 to 10 years	3 years
		Discounted cash flow	Option Adjusted Spread, fixed rate	9% to 14%	10 %
			Option Adjusted Spread, variable rate	9% to 15%	12 %
Structured liabilities					
Long-term debt	\$(1,646)		Equity correlation	5% to 100%	66 %
		Discounted cash flow, Market comparables, Industry standard derivative pricing <sup>(2)</sup>	Long-dated equity volatilities	4% to 79%	23 %
			Yield	7% to 43%	27 %
			Price	\$12 to \$91	\$76
			Duration	0 to 4 years	3 years
Net derivative assets					
Credit derivatives	\$(343 )		Yield	0% to 16%	6 %
			Upfront points	0 points to 100 points	75 points
		Discounted cash flow, Stochastic recovery correlation model	Credit spreads	93 bps to 847 bps	630 bps
			Credit correlation	30% to 88%	63 %
			Prepayment speed	10% to 20%	17 %
			Default rate	1% to 4%	3 %
			Loss severity	35	% n/a
Equity derivatives	\$(1,998)		Equity correlation	5% to 100%	66 %
		Industry standard derivative pricing <sup>(2)</sup>	Long-dated equity volatilities	4% to 79%	23 %
Commodity derivatives	\$5	Discounted cash flow, Industry standard derivative pricing <sup>(2)</sup>	Natural gas forward price	\$2/MMBtu to \$6/MMBtu	\$4/MMBtu
			Correlation	72% to 95%	85 %
			Volatilities	24% to 179%	51 %
Interest rate derivatives	\$533		Correlation (IR/IR)	15% to 99%	51 %
			Correlation (FX/IR)	0% to 40%	1 %
		Industry standard derivative pricing <sup>(3)</sup>	Illiquid IR and long-dated inflation rates	-10% to 38%	6 %
			Long-dated inflation volatilities	0% to 2%	1 %
Total net derivative assets	\$(1,803)				

<sup>(1)</sup> The categories are aggregated based upon product type which differs from financial statement classification. The following is a reconciliation to the line items in the table on page 119: Trading account assets – Corporate securities, trading loans and other of \$1.8 billion, Trading account assets – Non-U.S. sovereign debt of \$506 million, Trading account assets – Mortgage trading loans, ABS and other MBS of \$1.2 billion, AFS debt securities – Other taxable

securities of \$483 million, AFS debt securities – Tax-exempt securities of \$518 million, Loans and leases of \$667 million and LHFS of \$766 million.

- (2) Includes models such as Monte Carlo simulation and Black-Scholes.
- (3) Includes models such as Monte Carlo simulation, Black-Scholes and other methods that model the joint dynamics of interest, inflation and foreign exchange rates.
- (4) The weighted-average life is a product of changes in market rates of interest, prepayment rates and other model and cash flow assumptions.

CPR = Constant Prepayment Rate

CDR = Constant Default Rate

MMBtu = Million British thermal units

IR = Interest Rate

FX = Foreign Exchange

n/a = not applicable

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## Quantitative Information about Level 3 Fair Value Measurements at December 31, 2016

(Dollars in millions)					
Financial Instrument	Fair Value	Valuation Technique	Inputs Significant Unobservable Inputs	Ranges of Inputs	Weighted Average
Loans and Securities <sup>(1)</sup> Instruments backed by residential real estate assets	\$1,066		Yield	0% to 50%	7 %
Trading account assets – Mortgage trading loans, ABS and other MBS	337	Discounted cash flow, Market comparables	Prepayment speed	0% to 27% CPR	14 %
Loans and leases	718		Default rate	0% to 3% CDR	2 %
Loans held-for-sale Instruments backed by commercial real estate assets	11 \$317		Loss severity Yield	0% to 54% 0% to 39%	18 % 11 %
Trading account assets – Corporate securities, trading loans and other	178	Discounted cash flow, Market comparables	Price	\$0 to \$100	\$65
Trading account assets – Mortgage trading loans, ABS and other MBS	53				
Loans held-for-sale	86				
Commercial loans, debt securities and other	\$4,486		Yield	1% to 37%	14 %
Trading account assets – Corporate securities, trading loans and other	2,565		Prepayment speed	5% to 20%	19 %
Trading account assets – Non-U.S. sovereign debt	510	Discounted cash flow, Market comparables	Default rate	3% to 4%	4 %
Trading account assets – Mortgage trading loans, ABS and other MBS	821		Loss severity	0% to 50%	19 %
AFS debt securities – Other taxable securities	29		Price	\$0 to \$292	\$68
Loans and leases	2		Duration	0 to 5 years	3 years
Loans held-for-sale	559		Enterprise value/EBITDA multiple	34x	n/a
Auction rate securities	\$1,141	Discounted cash flow, Market comparables		\$10 to \$100	\$94
Trading account assets – Corporate securities, trading loans and other	34		Price		
AFS debt securities – Other taxable securities	565				
	542				



AFS debt securities – Tax-exempt securities					
MSRs	\$2,747		Weighted-average life, fixed rate <sup>(4)</sup>	0 to 15 years	6 years
			Weighted-average life, variable rate <sup>(4)</sup>	0 to 14 years	4 years
		Discounted cash flow	Option Adjusted Spread, fixed rate	9% to 14%	10 %
			Option Adjusted Spread, variable rate	9% to 15%	12 %
Structured liabilities					
Long-term debt	\$(1,514)		Equity correlation	13% to 100%	68 %
		Discounted cash flow, Market comparables	Long-dated equity volatilities	4% to 76%	26 %
		Industry standard derivative pricing <sup>(2)</sup>	Yield	6% to 37%	20 %
			Price	\$12 to \$87	\$73
			Duration	0 to 5 years	3 years
Net derivative assets					
Credit derivatives	\$(129 )		Yield	0% to 24%	13 %
			Upfront points	0 to 100 points	72 points
			Credit spreads	17 bps to 814 bps	248 bps
		Discounted cash flow, Stochastic recovery correlation model	Credit correlation	21% to 80%	44 %
			Prepayment speed	10% to 20% CPR	18 %
			Default rate	1% to 4% CDR	3 %
			Loss severity	35	% n/a
Equity derivatives	\$(1,690)		Equity correlation	13% to 100%	68 %
		Industry standard derivative pricing <sup>(2)</sup>	Long-dated equity volatilities	4% to 76%	26 %
Commodity derivatives	\$6		Natural gas forward price	\$2/MMBtu to \$6/MMBtu	\$4/MMBtu
		Discounted cash flow, Industry standard derivative pricing <sup>(2)</sup>	Correlation	66% to 95%	85 %
			Volatilities	23% to 96%	36 %
Interest rate derivatives	\$500		Correlation (IR/IR)	15% to 99%	56 %
			Correlation (FX/IR)	0% to 40%	2 %
		Industry standard derivative pricing <sup>(3)</sup>	Illiquid IR and long-dated inflation rates	-12% to 35%	5 %
			Long-dated inflation volatilities	0% to 2%	1 %
Total net derivative assets \$(1,313)					

The categories are aggregated based upon product type which differs from financial statement classification. The following is a reconciliation to the line items in the table on page 120: Trading account assets – Corporate securities, trading loans and other of \$2.8 billion, Trading account assets – Non-U.S. sovereign debt of \$510 million, Trading account assets – Mortgage trading loans, ABS and other MBS of \$1.2 billion, AFS debt securities – Other taxable securities of \$594 million, AFS debt securities – Tax-exempt securities of \$542 million, Loans and leases of \$720 million and LHFS of \$656 million.

<sup>(2)</sup> Includes models such as Monte Carlo simulation and Black-Scholes.

- (3) Includes models such as Monte Carlo simulation, Black-Scholes and other methods that model the joint dynamics of interest, inflation and foreign exchange rates.
- (4) The weighted-average life is a product of changes in market rates of interest, prepayment rates and other model and cash flow assumptions.

CPR = Constant Prepayment Rate

CDR = Constant Default Rate

EBITDA = Earnings before interest, taxes, depreciation and amortization

MMBtu = Million British thermal units

IR = Interest Rate

FX = Foreign Exchange

n/a = not applicable

In the previous tables, instruments backed by residential and commercial real estate assets include RMBS, commercial MBS, whole loans and mortgage CDOs. Commercial loans, debt securities and other include corporate CLOs and CDOs, commercial loans and bonds, and securities backed by non-real estate assets. Structured liabilities primarily include equity-linked notes that are accounted for under the fair value option.

The Corporation uses multiple market approaches in valuing certain of its Level 3 financial instruments. For example, market comparables and discounted cash flows are used together. For a given product, such as corporate debt securities, market comparables may be used to estimate some of the unobservable inputs and then these inputs are incorporated into a discounted cash flow model. Therefore, the balances disclosed encompass both of these techniques.

The level of aggregation and diversity within the products disclosed in the tables results in certain ranges of inputs being wide and unevenly distributed across asset and liability categories.

#### Sensitivity of Fair Value Measurements to Changes in Unobservable Inputs

##### Loans and Securities

A significant increase in market yields, default rates, loss severities or duration would result in a significantly lower fair value for long positions. Short positions would be impacted in a directionally opposite way. The impact of changes in prepayment speeds would have differing impacts depending on the seniority of the instrument and, in the case of CLOs, whether prepayments can be reinvested. A significant increase in price would result in a significantly higher fair value for long positions and short positions would be impacted in a directionally opposite way.

##### Mortgage Servicing Rights

The weighted-average lives and fair value of MSR are sensitive to changes in modeled assumptions. The weighted-average life is a product of changes in market rates of interest, prepayment rates and other model and cash flow assumptions. The weighted-average life represents the average period of time that the MSR's cash flows are expected to be received. Absent other changes, an increase (decrease) to the weighted-average life would generally result in an increase (decrease) in the fair value of the MSR. For example, a 10 percent or 20 percent decrease in prepayment rates, which impact the weighted-average life, could result in an increase in fair value of \$92 million or \$193 million, while a 10 percent or 20 percent increase in prepayment rates could result in a decrease in fair value of \$85 million or \$165 million. A 100 bp or 200 bp decrease in option-adjusted spread (OAS) levels could result in an increase in fair value of \$80 million or \$165 million, while a 100 bp or 200 bp increase in OAS levels could result in a decrease in

fair value of \$74 million or \$144 million. These sensitivities are hypothetical and actual amounts may vary materially. As the amounts indicate, changes in fair value based on variations in assumptions generally cannot be extrapolated because the relationship of the change in assumption to the change in fair value may not be linear. Also, the effect of a variation in a particular assumption on the fair value of MSR that continue to be held by the Corporation is calculated without changing any other assumption. In reality, changes in one factor may result in changes in another, which might magnify or counteract the sensitivities. In addition, these sensitivities do not reflect any hedge strategies that may be undertaken to mitigate such risk. The Corporation manages the risk in MSR with derivatives such as options and interest rate swaps, which are not designated as accounting hedges, as well as securities including MBS and U.S. Treasury securities. The securities used to manage the risk in the MSR are classified in other assets on the Consolidated Balance Sheet.

##### Structured Liabilities and Derivatives

For credit derivatives, a significant increase in market yield, upfront points (i.e., a single upfront payment made by a protection buyer at inception), credit spreads, default rates or loss severities would result in a significantly lower fair value for protection sellers and higher fair value for protection buyers. The impact of changes in prepayment speeds would have differing impacts depending on the seniority of the instrument.

Structured credit derivatives are impacted by credit correlation. Default correlation is a parameter that describes the degree of dependence among credit default rates within a credit portfolio that underlies a credit derivative instrument. The sensitivity of this input on the fair value varies depending on the level of subordination of the tranche. For senior tranches that are net purchases of protection, a significant increase in default correlation would result in a significantly higher fair value. Net short protection positions would be impacted in a directionally opposite way.

For equity derivatives, commodity derivatives, interest rate derivatives and structured liabilities, a significant change in long-dated rates and volatilities and correlation inputs (e.g., the degree of correlation between an equity security and an index, between two different commodities, between two different interest rates, or between interest rates and foreign exchange rates) would result in a significant impact to the fair value; however, the magnitude and direction of the impact depend on whether the Corporation is long or short the exposure. For structured liabilities, a significant increase in yield or decrease in price would result in a significantly lower fair value. A significant decrease in duration may result in a significantly higher fair value.

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## Nonrecurring Fair Value

The Corporation holds certain assets that are measured at fair value, but only in certain situations (e.g., impairment) and these measurements are referred to herein as nonrecurring. The amounts below represent assets still held as of the reporting date for which a nonrecurring fair value adjustment was recorded during the three and six months ended June 30, 2017 and 2016.

## Assets Measured at Fair Value on a Nonrecurring Basis

(Dollars in millions)	June 30, 2017		Three Months Ended June 30, 2017	Six Months Ended June 30, 2017
	Level 2	Level 3	Gains (Losses)	
Assets				
Loans held-for-sale	\$64	\$ —	\$ —	\$ —
Loans and leases <sup>(1)</sup>	—	609	(105)	(201)
Foreclosed properties <sup>(2, 3)</sup>	—	83	(26)	(35)
Other assets	309	—	(55)	(137)

Assets	June 30, 2016		Three Months Ended June 30, 2016	Six Months Ended June 30, 2016
	Level 2	Level 3	Gains (Losses)	
Loans held-for-sale	\$588	\$ 49	\$(7)	\$(12)
Loans and leases <sup>(1)</sup>	—	1,128	(183)	(322)
Foreclosed properties <sup>(2, 3)</sup>	2	119	(28)	(37)
Other assets	142	—	(34)	(47)

Includes \$43 million and \$78 million of losses on loans that were written down to a collateral value of zero during <sup>(1)</sup> the three and six months ended June 30, 2017, compared to losses of \$56 million and \$86 million for the same periods in 2016.

Amounts are included in other assets on the Consolidated Balance Sheet and represent the carrying value of <sup>(2)</sup> foreclosed properties that were written down subsequent to their initial classification as foreclosed properties.

Losses on foreclosed properties include losses taken during the first 90 days after transfer of a loan to foreclosed properties.

<sup>(3)</sup> Excludes \$1.0 billion and \$1.3 billion of properties acquired upon foreclosure of certain government-guaranteed loans (principally FHA-insured loans) as of June 30, 2017 and 2016.

The table below presents information about significant unobservable inputs related to the Corporation's nonrecurring Level 3 financial assets and liabilities at June 30, 2017 and December 31, 2016. Loans and leases backed by residential real estate assets represent residential mortgages where the loan has been written down to the fair value of the underlying collateral.

## Quantitative Information about Nonrecurring Level 3 Fair Value Measurements

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June 30, 2017

(Dollars in millions)

Financial Instrument	Fair Value	Valuation Technique	Inputs Significant Unobservable Inputs	Ranges of Inputs	Weighted Average
Loans and leases backed by residential real estate assets	\$609	Market comparables	OREO discount Costs to sell	8% to 54% 7% to 45%	21 % 9 %

December 31, 2016

Loans and leases backed by residential real estate assets	\$ 1,416	Market comparables	OREO discount Costs to sell	8% to 56% 7% to 45%	21 % 9 %
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NOTE 15 Fair Value Option

The Corporation elects to account for certain financial instruments under the fair value option. For more information on the primary financial instruments for which the fair value option elections have been made, see Note 21 – Fair Value Option to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.

The following tables provide information about the fair value carrying amount and the contractual principal outstanding of assets and liabilities accounted for under the fair value option at June 30, 2017 and December 31, 2016, and information about where changes in the fair value of assets and liabilities accounted for under the fair value option are included in the Consolidated Statement of Income for the three and six months ended June 30, 2017 and 2016.

Fair Value Option Elections

(Dollars in millions)	June 30, 2017			December 31, 2016		
	Fair Value Carrying Amount	Contractual Principal Outstanding	Fair Value Carrying Amount Less Unpaid Principal	Fair Value Carrying Amount	Contractual Principal Outstanding	Fair Value Carrying Amount Less Unpaid Principal
Federal funds sold and securities borrowed or purchased under agreements to resell	\$50,758	\$ 50,675	\$ 83	\$49,750	\$ 49,615	\$ 135
Loans reported as trading account assets <sup>(1)</sup>	5,630	11,072	(5,442 )	6,215	11,557	(5,342 )
Trading inventory – other	9,879	n/a	n/a	8,206	n/a	n/a
Consumer and commercial loans	7,325	7,340	(15 )	7,085	7,190	(105 )
Loans held-for-sale	2,707	4,287	(1,580 )	4,026	5,595	(1,569 )
Customer receivables and other assets	253	250	3	253	250	3
Long-term deposits	456	430	26	731	672	59
Federal funds purchased and securities loaned or sold under agreements to repurchase	32,132	32,369	(237 )	35,766	35,929	(163 )
Short-term borrowings	1,572	1,572	—	2,024	2,024	—
Unfunded loan commitments	138	n/a	n/a	173	n/a	n/a
Long-term debt <sup>(2)</sup>	29,073	28,953	120	30,037	29,862	175

A significant portion of the loans reported as trading account assets are distressed loans which trade and were purchased at a deep discount to par, and the remainder are loans with a fair value near contractual principal outstanding.

<sup>(2)</sup> Includes structured liabilities with a fair value of \$28.7 billion and \$29.7 billion, and contractual principal outstanding of \$28.6 billion and \$29.5 billion at June 30, 2017 and December 31, 2016.

n/a = not applicable

Gains (Losses) Relating to Assets and Liabilities Accounted for Under the Fair Value Option

(Dollars in millions)	Three Months Ended June 30, 2017			
	Trading Account Profits (Losses)	Mortgage Banking Income (Loss)	Other Income (Loss)	Total
Federal funds sold and securities borrowed or purchased under agreements to resell	\$(8 )	\$ —	\$ —	\$(8 )
Loans reported as trading account assets	47	—	—	47

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Trading inventory – other <sup>(1)</sup>	522	—	—	522
Consumer and commercial loans	4	—	20	24
Loans held-for-sale <sup>(2)</sup>	(1	) 46	30	75
Long-term deposits	14	—	3	17
Federal funds purchased and securities loaned or sold under agreements to repurchase	2	—	—	2
Short-term borrowings	(3	) —	—	(3
Unfunded loan commitments	—	—	(4	) (4
Long-term debt <sup>(3, 4)</sup>	107	—	(34	) 73
Total	\$684	\$ 46	\$ 15	\$745

Three Months Ended June 30,  
2016

Federal funds sold and securities borrowed or purchased under agreements to resell	\$(9	) \$ —	\$—	\$(9
Loans reported as trading account assets	14	—	—	14
Trading inventory – other <sup>(1)</sup>	(243	) —	—	(243
Consumer and commercial loans	15	—	(31	) (16
Loans held-for-sale <sup>(2)</sup>	5	145	20	170
Other assets	—	—	(5	) (5
Long-term deposits	(2	) —	(8	) (10
Federal funds purchased and securities loaned or sold under agreements to repurchase	11	—	—	11
Unfunded loan commitments	—	—	163	163
Long-term debt <sup>(3, 4)</sup>	(574	) —	(23	) (597
Total	\$(783)	\$ 145	\$ 116	\$(522)

(1) The gains (losses) in trading account profits (losses) are primarily offset by gains (losses) on trading liabilities that hedge these assets.

(2) Includes the value of IRLCs on funded loans, including those sold during the period.

(3) The majority of the net gains (losses) in trading account profits relate to the embedded derivative in structured liabilities and are offset by gains (losses) on derivatives and securities that hedge these liabilities.

(4) For the cumulative impact of changes in the Corporation's own credit spreads and the amount recognized in OCI, see Note 12 – Accumulated Other Comprehensive Income (Loss). For information on how the Corporation's own credit spread is determined, see Note 20 – Fair Value Measurements to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.



## Gains (Losses) Relating to Assets and Liabilities Accounted for Under the Fair Value Option

(Dollars in millions)	Six Months Ended June 30, 2017			Total
	Trading Account Profits (Losses)	Mortgage Banking Income (Loss)	Other Income (Loss)	
Federal funds sold and securities borrowed or purchased under agreements to resell	\$ (20 )	\$ —	\$ —	\$ (20 )
Loans reported as trading account assets	197	—	—	197
Trading inventory – other <sup>(1)</sup>	1,673	—	—	1,673
Consumer and commercial loans	9	—	39	48
Loans held-for-sale <sup>(2)</sup>	—	96	74	170
Long-term deposits	15	—	8	23
Federal funds purchased and securities loaned or sold under agreements to repurchase	(43 )	—	—	(43 )
Short-term borrowings	(5 )	—	—	(5 )
Unfunded loan commitments	—	—	34	34
Long-term debt <sup>(3, 4)</sup>	(55 )	—	(71 )	(126 )
<b>Total</b>	<b>\$1,771</b>	<b>\$ 96</b>	<b>\$ 84</b>	<b>\$1,951</b>

	Six Months Ended June 30, 2016			
Federal funds sold and securities borrowed or purchased under agreements to resell	\$ (1 )	\$ —	\$ —	\$ (1 )
Loans reported as trading account assets	126	—	—	126
Trading inventory – other <sup>(1)</sup>	(356 )	—	—	(356 )
Consumer and commercial loans	34	—	(21 )	13
Loans held-for-sale <sup>(2)</sup>	5	314	55	374
Other assets	—	—	(3 )	(3 )
Long-term deposits	(11 )	—	(30 )	(41 )
Federal funds purchased and securities loaned or sold under agreements to repurchase	3	—	—	3
Unfunded loan commitments	—	—	311	311
Long-term debt <sup>(3, 4)</sup>	(580 )	—	(53 )	(633 )
<b>Total</b>	<b>\$(780 )</b>	<b>\$ 314</b>	<b>\$ 259</b>	<b>\$(207 )</b>

(1) The gains (losses) in trading account profits (losses) are primarily offset by gains (losses) on trading liabilities that hedge these assets.

(2) Includes the value of IRLCs on funded loans, including those sold during the period.

(3) The majority of the net gains (losses) in trading account profits relate to the embedded derivative in structured liabilities and are offset by gains (losses) on derivatives and securities that hedge these liabilities.

For the cumulative impact of changes in the Corporation's own credit spreads and the amount recognized in OCI, see Note 12 – Accumulated Other Comprehensive Income (Loss). For information on how the Corporation's own credit spread is determined, see Note 20 – Fair Value Measurements to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.

## Gains (Losses) Related to Borrower-specific Credit Risk for Assets Accounted for Under the Fair Value Option

	Three Months Ended June 30		Six Months Ended June 30	
(Dollars in millions)	2017	2016	2017	2016
Loans reported as trading account assets	\$7	\$(4)	\$20	\$5
Consumer and commercial loans	22	(29)	41	(39)
Loans held-for-sale	(1)	5	(1)	4

#### NOTE 16 Fair Value of Financial Instruments

Financial instruments are classified into three levels based on the established fair value hierarchy. For additional information, see Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K. The following disclosures include financial instruments that are not carried at fair value or only a portion of the ending balance at June 30, 2017 and December 31, 2016 is carried at fair value on the Consolidated Balance Sheet. For more information on these financial instruments and their valuation methodologies, see Note 20 – Fair Value Measurements and Note 22 – Fair Value of Financial Instruments to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.

#### Fair Value of Financial Instruments

The carrying values and fair values by fair value hierarchy of certain financial instruments where only a portion of the ending balance was carried at fair value at June 30, 2017 and December 31, 2016 are presented in the following table.

#### Fair Value of Financial Instruments

(Dollars in millions)	June 30, 2017			
	Carrying Value	Fair Value		Total
		Level 2	Level 3	
Financial assets				
Loans	\$884,114	\$64,888	\$827,122	\$892,010
Loans held-for-sale	5,882	4,867	1,015	5,882
Financial liabilities				
Deposits	1,262,980	1,263,010	—	1,263,010
Long-term debt	223,923	229,134	1,646	230,780
	December 31, 2016			
Financial assets				
Loans	\$873,209	\$71,793	\$815,329	\$887,122
Loans held-for-sale	9,066	8,082	984	9,066
Financial liabilities				
Deposits	1,260,934	1,261,086	—	1,261,086
Long-term debt	216,823	220,071	1,514	221,585

## Commercial Unfunded Lending Commitments

Fair values were generally determined using a discounted cash flow valuation approach which is applied using market-based credit default swaps or internally developed benchmark credit curves. The Corporation accounts for certain loan commitments under the fair value option. The carrying values and fair values of the Corporation's commercial unfunded lending commitments were \$895 million and \$4.2 billion at June 30, 2017, and \$937 million and \$4.9 billion at December 31, 2016. Commercial unfunded lending commitments are primarily classified as Level 3. The carrying value of these commitments is classified in accrued expenses and other liabilities.

The Corporation does not estimate the fair values of consumer unfunded lending commitments because, in many instances, the Corporation can reduce or cancel these commitments by providing notice to the borrower. For more information on commitments, see Note 10 – Commitments and Contingencies.

## NOTE 17 Business Segment Information

The Corporation reports its results of operations through the following four business segments: Consumer Banking, GWIM, Global Banking and Global Markets, with the remaining operations recorded in All Other. For additional information, see Note 24 – Business Segment Information to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K. The tables below present net income (loss) and the components thereto (with net interest income on an FTE basis) for the three and six months ended June 30, 2017 and 2016, and total assets at June 30, 2017 and 2016 for each business segment, as well as All Other, including a reconciliation of the four business segments' total revenue, net of interest expense, on an FTE basis, and net income to the Consolidated Statement of Income, and total assets to the Consolidated Balance Sheet.

## Results of Business Segments and All Other

At and for the three months ended June 30 (Dollars in millions)	Total Corporation <sup>(1)</sup>		Consumer Banking	
	2017	2016	2017	2016
Net interest income (FTE basis)	\$11,223	\$10,341	\$5,960	\$5,207
Noninterest income	11,843	11,168	2,548	2,588
Total revenue, net of interest expense (FTE basis)	23,066	21,509	8,508	7,795
Provision for credit losses	726	976	834	726
Noninterest expense	13,726	13,493	4,409	4,418
Income before income taxes (FTE basis)	8,614	7,040	3,265	2,651
Income tax expense (FTE basis)	3,345	2,257	1,233	977
Net income	\$5,269	\$4,783	\$2,032	\$1,674
Period-end total assets	\$2,254,529	\$2,186,966	\$735,176	\$668,464

	Global Wealth & Investment Management		Global Banking	
	2017	2016	2017	2016
Net interest income (FTE basis)	\$1,597	\$1,403	\$2,711	\$2,425
Noninterest income	3,098	3,022	2,328	2,271
Total revenue, net of interest expense (FTE basis)	4,695	4,425	5,039	4,696
Provision for credit losses	11	14	15	199
Noninterest expense	3,392	3,285	2,154	2,125
Income before income taxes (FTE basis)	1,292	1,126	2,870	2,372
Income tax expense (FTE basis)	488	421	1,084	874
Net income	\$804	\$705	\$1,786	\$1,498
Period-end total assets	\$274,746	\$286,846	\$410,580	\$397,591

Global Markets

All Other

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	2017	2016	2017	2016
Net interest income (FTE basis)	\$864	\$1,088	\$91	\$218
Noninterest income	3,082	3,221	787	66
Total revenue, net of interest expense (FTE basis)	3,946	4,309	878	284
Provision for credit losses	25	(5	) (159	)42
Noninterest expense	2,649	2,583	1,122	1,082
Income (loss) before income taxes (FTE basis)	1,272	1,731	(85	) (840
Income tax expense (benefit) (FTE basis)	442	618	98	(633
Net income (loss)	\$830	\$1,113	\$(183	) \$(207
Period-end total assets	\$633,193	\$577,428	\$200,834	\$256,637

(1) There were no material intersegment revenues.

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## Results of Business Segments and All Other

At and for the six months ended June 30 (Dollars in millions)	Total Corporation <sup>(1)</sup>		Consumer Banking	
	2017	2016	2017	2016
Net interest income (FTE basis)	\$22,478	\$21,041	\$11,741	\$10,535
Noninterest income	23,033	21,473	5,051	5,117
Total revenue, net of interest expense (FTE basis)	45,511	42,514	16,792	15,652
Provision for credit losses	1,561	1,973	1,672	1,257
Noninterest expense	28,574	28,309	8,818	8,959
Income before income taxes (FTE basis)	15,376	12,232	6,302	5,436
Income tax expense (FTE basis)	5,251	3,977	2,378	2,000
Net income	\$10,125	\$8,255	\$3,924	\$3,436
Period-end total assets	\$2,254,529	\$2,186,966	\$735,176	\$668,464

	Global Wealth & Investment Management		Global Banking	
	2017	2016	2017	2016
Net interest income (FTE basis)	\$3,157	\$2,916	\$5,486	\$4,969
Noninterest income	6,130	5,978	4,508	4,181
Total revenue, net of interest expense (FTE basis)	9,287	8,894	9,994	9,150
Provision for credit losses	34	39	32	752
Noninterest expense	6,722	6,555	4,317	4,299
Income before income taxes (FTE basis)	2,531	2,300	5,645	4,099
Income tax expense (FTE basis)	955	853	2,130	1,509
Net income	\$1,576	\$1,447	\$3,515	\$2,590
Period-end total assets	\$274,746	\$286,846	\$410,580	\$397,591

	Global Markets		All Other	
	2017	2016	2017	2016
Net interest income (FTE basis)	\$1,913	\$2,272	\$181	\$349
Noninterest income	6,741	5,987	603	210
Total revenue, net of interest expense (FTE basis)	8,654	8,259	784	559
Provision for credit losses	8	4	(185)	(79)
Noninterest expense	5,406	5,032	3,311	3,464
Income (loss) before income taxes (FTE basis)	3,240	3,223	(2,342)	(2,826)
Income tax expense (benefit) (FTE basis)	1,113	1,138	(1,325)	(1,523)
Net income (loss)	\$2,127	\$2,085	\$(1,017)	\$(1,303)
Period-end total assets	\$633,193	\$577,428	\$200,834	\$256,637

## Business Segment Reconciliations

	Three Months Ended June 30		Six Months Ended June 30	
	2017	2016	2017	2016
Segments' total revenue, net of interest expense (FTE basis)	\$22,188	\$21,225	\$44,727	\$41,955
Adjustments <sup>(2)</sup> :				
ALM activities	104	137	59	31
Liquidating businesses and other	774	147	725	528
FTE basis adjustment	(237)	(223)	(434)	(438)

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Consolidated revenue, net of interest expense	\$22,829	\$21,286	\$45,077	\$42,076
Segments' total net income	5,452	4,990	11,142	9,558
Adjustments, net-of-taxes <sup>(2)</sup> :				
ALM activities	(86	)(36	)(265	)(275
Liquidating businesses and other	(97	)(171	)(752	)(1,028
Consolidated net income	\$5,269	\$4,783	\$10,125	\$8,255

			June 30	
			2017	2016
Segments' total assets			\$2,053,695	\$1,930,329
Adjustments <sup>(2)</sup> :				
ALM activities, including securities portfolio			620,502	619,417
Liquidating businesses and other			97,993	129,560
Elimination of segment asset allocations to match liabilities			(517,661	)(492,340
Consolidated total assets			\$2,254,529	\$2,186,966

<sup>(1)</sup> There were no material intersegment revenues.

<sup>(2)</sup> Adjustments include consolidated income, expense and asset amounts not specifically allocated to individual business segments.

## Glossary

**Alt-A Mortgage** – A type of U.S. mortgage that is considered riskier than A-paper, or "prime," and less risky than "subprime," the riskiest category. Alt-A interest rates therefore tend to be between those of prime and subprime consumer real estate loans. Typically, Alt-A mortgages are characterized by borrowers with less than full documentation, lower credit scores and higher LTVs.

**Assets in Custody** – Consist largely of custodial and non-discretionary trust assets excluding brokerage assets administered for clients. Trust assets encompass a broad range of asset types including real estate, private company ownership interest, personal property and investments.

**Assets Under Management (AUM)** – The total market value of assets under the investment advisory and/or discretion of GWIM which generate asset management fees based on a percentage of the assets' market values. AUM reflects assets that are generally managed for institutional, high net worth and retail clients, and are distributed through various investment products including mutual funds, other commingled vehicles and separate accounts.

**Banking Book** – All on- and off-balance sheet financial instruments of the Corporation except for those positions that are held for trading purposes.

**Carrying Value (with respect to loans)** – The amount at which a loan is recorded on the balance sheet. For loans recorded at amortized cost, carrying value is the unpaid principal balance net of unamortized deferred loan origination fees and costs and unamortized purchase premiums or discounts, less net charge-offs and interest payments applied as a reduction of principal under the cost recovery method for loans that have been on nonaccrual status. For PCI loans, the carrying value equals fair value upon acquisition adjusted for subsequent cash collections and yield accreted to date. For credit card loans, the carrying value also includes interest that has been billed to the customer. For loans classified as held-for-sale, carrying value is the lower of carrying value as described in the sentences above, or fair value. For loans where we have elected the fair value option, the carrying value is fair value.

**Client Brokerage Assets** – Client assets which are held in brokerage accounts, including non-discretionary brokerage and fee-based assets that generate brokerage income and asset management fee revenue.

**Committed Credit Exposure** – Includes any funded portion of a facility plus the unfunded portion of a facility on which the lender is legally bound to advance funds during a specified period under prescribed conditions.

**Credit Derivatives** – Contractual agreements that provide protection against a credit event on one or more referenced obligations. The nature of a credit event is established by the protection purchaser and the protection seller at the inception of the transaction, and such events generally include bankruptcy or insolvency of the referenced credit entity, failure to meet payment obligations when due, as well as acceleration of indebtedness and payment repudiation or moratorium. The purchaser of the credit derivative pays a periodic fee in return for a payment by the protection seller upon the occurrence, if any, of such a credit event. A CDS is a type of a credit derivative.

**Credit Valuation Adjustment (CVA)** – A portfolio adjustment required to properly reflect the counterparty credit risk exposure as part of the fair value of derivative instruments.

**Debit Valuation Adjustment (DVA)** – A portfolio adjustment required to properly reflect the Corporation's own credit risk exposure as part of the fair value of derivative instruments and/or structured liabilities.

**Funding Valuation Adjustment (FVA)** – A portfolio adjustment required to include funding costs on uncollateralized derivatives and derivatives where the Corporation is not permitted to use the collateral it receives.

**Interest Rate Lock Commitment (IRLC)** – Commitment with a loan applicant in which the loan terms, including interest rate and price, are guaranteed for a designated period of time subject to credit approval.

**Letter of Credit** – A document issued on behalf of a customer to a third party promising to pay the third party upon presentation of specified documents. A letter of credit effectively substitutes the issuer's credit for that of the customer.

**Loan-to-value (LTV)** – A commonly used credit quality metric. LTV is calculated as the outstanding carrying value of the loan divided by the estimated value of the property securing the loan. Estimated property values are generally determined through the use of automated valuation models (AVMs) or the CoreLogic Case-Shiller Index. An AVM is a tool that estimates the value of a property by reference to large volumes of market data including sales of comparable properties and price trends specific to the MSA in which the property being valued is located. CoreLogic Case-Shiller is a widely used index based on data from repeat sales of single family homes. CoreLogic Case-Shiller indexed-based values are reported on a three-month or one-quarter lag.

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Margin Receivable – An extension of credit secured by eligible securities in certain brokerage accounts.

Matched Book – Repurchase and resale agreements or securities borrowed and loaned transactions where the overall asset and liability position is similar in size and/or maturity. Generally, these are entered into to accommodate customers where the Corporation earns the interest rate spread.

Mortgage Servicing Rights (MSR) – The right to service a mortgage loan when the underlying loan is sold or securitized. Servicing includes collections for principal, interest and escrow payments from borrowers and accounting for and remitting principal and interest payments to investors.

Net Interest Yield – Net interest income divided by average total interest-earning assets.

Nonperforming Loans and Leases – Includes loans and leases that have been placed on nonaccrual status, including nonaccruing loans whose contractual terms have been restructured in a manner that grants a concession to a borrower experiencing financial difficulties. Loans accounted for under the fair value option, PCI loans and LHFS are not reported as nonperforming loans and leases. Credit card receivables, residential mortgage loans that are insured by the FHA or through long-term credit protection agreements with FNMA and FHLMC (fully-insured loan portfolio) and certain other consumer loans are not placed on nonaccrual status and are, therefore, not reported as nonperforming loans and leases.

Operating Margin – Income before income taxes divided by total revenue, net of interest expense.

Pay Option Loans – Pay option adjustable-rate mortgages have interest rates that adjust monthly and minimum required payments that adjust annually. During an initial five- or ten-year period, minimum required payments may increase by no more than 7.5 percent. If payments are insufficient to pay all of the monthly interest charges, unpaid interest is added to the loan balance (i.e., negative amortization) until the loan balance increases to a specified limit, at which time a new monthly payment amount adequate to repay the loan over its remaining contractual life is established.

Prompt Corrective Action (PCA) – A framework established by the U.S. banking regulators requiring banks to maintain certain levels of regulatory capital ratios, comprised of five categories of capitalization: “well capitalized,” “adequately capitalized,” “undercapitalized,” “significantly undercapitalized” and “critically undercapitalized.” Insured depository institutions that fail to meet certain of these capital levels are subject to increasingly strict limits on their activities, including their ability to make capital distributions, pay management compensation, grow assets and take other actions.

Purchased Credit-impaired (PCI) Loan – A loan purchased as an individual loan, in a portfolio of loans or in a business combination with evidence of deterioration in credit quality since origination for which it is probable, upon acquisition, that the investor will be unable to collect all contractually required payments. These loans are recorded at fair value upon acquisition.

Subprime Loans – Although a standard industry definition for subprime loans (including subprime mortgage loans) does not exist, the Corporation defines subprime loans as specific product offerings for higher risk borrowers, including individuals with one or a combination of high credit risk factors, such as low FICO scores, high debt to income ratios and inferior payment history.

Troubled Debt Restructurings (TDRs) – Loans whose contractual terms have been restructured in a manner that grants a concession to a borrower experiencing financial difficulties. Certain consumer loans for which a binding offer to restructure has been extended are also classified as TDRs. Concessions could include a reduction in the interest rate to a rate that is below market on the loan, payment extensions, forgiveness of principal, forbearance, loans discharged in bankruptcy or other actions intended to maximize collection. Secured consumer loans that have been discharged in Chapter 7 bankruptcy and have not been reaffirmed by the borrower are classified as TDRs at the time of discharge from bankruptcy.

Value-at-Risk (VaR) – VaR is a model that simulates the value of a portfolio under a range of hypothetical scenarios in order to generate a distribution of potential gains and losses. VaR represents the loss the portfolio is expected to experience with a given confidence level based on historical data. A VaR model is an effective tool in estimating ranges of potential gains and losses on our trading portfolios.



Acronyms

ABS	Asset-backed securities
AFS	Available-for-sale
ALM	Asset and liability management
AUM	Assets under management
BANA	Bank of America, National Association
BHC	Bank holding company
bps	basis points
CCAR	Comprehensive Capital Analysis and Review
CDO	Collateralized debt obligation
CDS	Credit default swap
CLO	Collateralized loan obligation
CLTV	Combined loan-to-value
CVA	Credit valuation adjustment
DVA	Debit valuation adjustment
EPS	Earnings per common share
ERC	Enterprise Risk Committee
FASB	Financial Accounting Standards Board
FCA	Financial Conduct Authority
FDIC	Federal Deposit Insurance Corporation
FHA	Federal Housing Administration
FHLB	Federal Home Loan Bank
FHLMC	Freddie Mac
FICC	Fixed-income, currencies and commodities
FICO	Fair Isaac Corporation (credit score)
FNMA	Fannie Mae
FTE	Fully taxable-equivalent
FVA	Funding valuation adjustment
GAAP	Accounting principles generally accepted in the United States of America
GLS	Global Liquidity Sources
GNMA	Government National Mortgage Association
GPI	Global Principal Investments
GSE	Government-sponsored enterprise
G-SIB	Global systemically important bank
GWIM	Global Wealth & Investment Management
HELOC	Home equity line of credit
HQLA	High Quality Liquid Assets
HTM	Held-to-maturity
ICAAP	Internal Capital Adequacy Assessment Process
IMM	Internal models methodology
IRLC	Interest rate lock commitment
ISDA	International Swaps and Derivatives Association, Inc.
LCR	Liquidity Coverage Ratio
LHFS	Loans held-for-sale
LIBOR	London InterBank Offered Rate
LTV	Loan-to-value
MBS	Mortgage-backed securities
MD&A	Management's Discussion and Analysis of Financial Condition and Results of Operations
MI	Mortgage insurance

MLGWM	Merrill Lynch Global Wealth Management
MLI	Merrill Lynch International
MLPCC	Merrill Lynch Professional Clearing Corp
MLPF&S	Merrill Lynch, Pierce, Fenner & Smith Incorporated
MSA	Metropolitan Statistical Area
MSR	Mortgage servicing right
NSFR	Net Stable Funding Ratio
OAS	Option-adjusted spread
OCI	Other comprehensive income
OTC	Over-the-counter
OTTI	Other-than-temporary impairment
PCA	Prompt Corrective Action
PCI	Purchased credit-impaired
PPI	Payment protection insurance
RMBS	Residential mortgage-backed securities
RSU	Restricted stock unit
SBLC	Standby letter of credit
SEC	Securities and Exchange Commission
SLR	Supplementary leverage ratio
TDR	Troubled debt restructurings
TLAC	Total Loss-Absorbing Capacity
TTF	Time-to-required funding
VA	U.S. Department of Veterans Affairs
VaR	Value-at-Risk
VIE	Variable interest entity

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## Part II. Other Information

## Bank of America Corporation and Subsidiaries

## Item 1. Legal Proceedings

See Litigation and Regulatory Matters in Note 10 – Commitments and Contingencies to the Consolidated Financial Statements, which is incorporated by reference in this Item 1, for litigation and regulatory disclosure that supplements the disclosure in Note 12 – Commitments and Contingencies to the Consolidated Financial Statements of the Corporation's 2016 Annual Report on Form 10-K.

## Item 1A. Risk Factors

There are no material changes from the risk factors set forth under Part 1, Item 1A. Risk Factors of the Corporation's 2016 Annual Report on Form 10-K.

## Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

The table below presents share repurchase activity for the three months ended June 30, 2017. The primary source of funds for cash distributions by the Corporation to its shareholders is dividends received from its banking subsidiaries. Each of the banking subsidiaries is subject to various regulatory policies and requirements relating to the payment of dividends, including requirements to maintain capital above regulatory minimums. All of the Corporation's preferred stock outstanding has preference over the Corporation's common stock with respect to payment of dividends.

(Dollars in millions, except per share information; shares in thousands)	Common Shares Repurchased (1)	Weighted-Average Per Share Price	Shares	Remaining
			Purchased as Part of Publicly Announced <sup>(2)</sup> Programs	Buyback Authority Amounts
April 1 - 30, 2017	20,305	\$ 23.07	20,290	\$ 1,799
May 1 - 31, 2017	53,038	23.53	53,035	551
June 1 - 30, 2017	22,984	22.63	22,982	31
Three months ended June 30, 2017	96,327	23.22		

Includes shares of the Corporation's common stock acquired by the Corporation in connection with satisfaction of (1) tax withholding obligations on vested restricted stock or restricted stock units and certain forfeitures and terminations of employment-related awards under equity incentive plans.

On January 13, 2017, the Corporation announced that the Board approved the repurchase of an additional \$1.8 billion of common stock during the first and second quarters of 2017. Amounts shown in this column include shares repurchased under this additional repurchase authority in addition to the previously announced repurchases (2) associated with the 2016 CCAR capital plan. During the three months ended June 30, 2017, pursuant to the Board's authorization, the Corporation repurchased \$2.2 billion of common stock, which included common stock to offset equity-based compensation awards. For additional information, see Capital Management -- CCAR and Capital Planning on page 28 and Note 11 – Shareholders' Equity to the Consolidated Financial Statements.

The Corporation did not have any unregistered sales of equity securities during the three months ended June 30, 2017.

Item 6. Exhibits

- Exhibit 3(a) Amended and Restated Certificate of Incorporation of the Corporation, as in effect on the date hereof, incorporated by reference to Exhibit 3(a) of the Corporation's Quarterly Report on Form 10-Q (File No. 1-6523) for the quarterly period ended March 31, 2016 filed on May 2, 2016
- Exhibit 3(b) Amended and Restated Bylaws of the Corporation, as in effect on the date hereof, incorporated by reference to Exhibit 3.1 of the Corporation's Current Report on Form 8-K (File No. 1-6523) filed on March 20, 2015
- Exhibit 10 Third Amendment to Aircraft Time Sharing Agreement dated July 10, 2017 between Bank of America, N.A. and Brian T. Moynihan <sup>(1, 2)</sup>
- Exhibit 11 Earnings Per Share Computation – included in Note 13 – Earnings Per Common Share to the Consolidated Financial Statements <sup>(1)</sup>
- Exhibit 12 Ratio of Earnings to Fixed Charges <sup>(1)</sup>  
Ratio of Earnings to Fixed Charges and Preferred Dividends <sup>(1)</sup>
- Exhibit 31(a) Certification of the Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 <sup>(1)</sup>
- Exhibit 31(b) Certification of the Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 <sup>(1)</sup>
- Exhibit 32(a) Certification of the Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 <sup>(1)</sup>
- Exhibit 32(b) Certification of the Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 <sup>(1)</sup>
- Exhibit 101.INS XBRL Instance Document <sup>(1)</sup>
- Exhibit 101.SCH XBRL Taxonomy Extension Schema Document <sup>(1)</sup>
- Exhibit 101.CAL XBRL Taxonomy Extension Calculation Linkbase Document <sup>(1)</sup>
- Exhibit 101.LAB XBRL Taxonomy Extension Label Linkbase Document <sup>(1)</sup>
- Exhibit 101.PRE XBRL Taxonomy Extension Presentation Linkbase Document <sup>(1)</sup>
- Exhibit 101.DEF XBRL Taxonomy Extension Definitions Linkbase Document <sup>(1)</sup>

<sup>(1)</sup> Filed herewith.

<sup>(2)</sup> Exhibit is a management contract or compensatory plan or arrangement.

Signature

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Bank of America  
Corporation  
Registrant

Date: July 31, 2017                      /s/ Rudolf  
A. Bless  
Rudolf A.  
Bless  
Chief  
Accounting  
Officer

Index to Exhibits

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